DOCUMENT RESUME

ED 154 558 EC 110 261

AUTHOR	White, Alan J., Ed.
TITLE	Conn-Cept VI: A Connecticut Primer on Program Development for the Gifted and Talented. Task Force Report on Evaluation and Resource Directory. 1978 Revised Edition.
INSTITUTION	Connecticut State Dept. of Education, Hartford. Bureau of Pupil Personnel and Special Education Services.
PUB DATE	Jan 78
NOTE	111p.; Published originally as Evaluation of Programs for the Gifted and Talented: Report of the Task Force on Evaluation, 1974; For related information, see EC 110 260
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	Bibliographies; Conceptual Schemes; Elementary Secondary Education; Evaluation Methods; Financial Support; *Gifted; *Models; *Resources; *Student Evaluation; *Talented Students; *Talent Identification

ABSTRACT

The document provides a supplement on evaluation and information on resources related to the identification of gifted and talented children. Section I on evaluation covers three different approaches to evaluation along with a statement of their strengths and weaknesses and examples of assessment techniques appropriate to each method. Also described are two comprehensive evaluation models, each combining various features of the product, process, and presage approaches. Section II focuses on locating local community resources, getting a proposal funded, and contacting resource agencies and organizations. Also included are bibliographies on the following areas: identification, curriculum, program development, affective needs, books for parents, and evaluation. (SBH)

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ED154558

CONN-CEPT VI

A CONNECTICUT PRIMER ON PROGRAM DEVELOPMENT FOR THE GIFTED AND TALENTED

SUPPLEMENT ON EVALUATION AND RESOURCE DIRECTORY

(Published originally as Evaluation of Programs for the Gifted and Talented: Report of the Task Force on Evaluation, 1974)

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January 1978

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FOREWORD

This primer represents the culmination of the efforts of a designated task force of professional personnel to update our 1974 Task Force Report on Evaluation and Resource Directory.

We are indebted to Alan White and the members of the 1977 task force who updated, compiled and completed this primer to be used by personnel working with the gifted and talented at the local district level. They accomplished this task in a few short months. In addition to doing research and writing articles, the task force attempted to bring together the best information from a wide variety of sources.

We wish to extend our personal thanks to all who have worked on this report in the interest of the gifted and talented in Connecticut.

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SUPPLEMENT ON EVALUATION

INTRODUCTION

Gifted programs depend for their very existence on the support of local communities, boards of education, and the administrative and teaching personnel in each school district. In an effort to assure themselves that time and resources are being well spent, these groups and individuals rightfully expect special programs to be held accountable for instructional outcomes and fulfillments of stated objectives. Evaluation of programs for the gifted and talented is, however, fraught with difficulties. It is no simple matter, for example, to locate tests which adequately measure gains in special interest areas or which assess levels of cognitive operation beyond simple recall of facts. It is also difficult to measure many important affective outcomes. However, with a thorough knowledge of the techniques and instruments available, meaningful evaluation can be achieved.

Three different approaches to evaluation are described in this booklet along with a statement of their strengths and weaknesses and examples of assessment techniques appropriate to each method. Also included are two comprehensive evaluation models, each combining various features of the product, process, and presage approaches. A variety of informal measures many of which have been developed by local Connecticut programs for their own use, can also be used profitably in conjunction with these two comprehensive models. Finally, a bibliography is offered in the hope that it will provide further information and direction for interested readers.

The truest evaluation of programs for the gifted and talented must, however, focus on the individual students themselves and will ultimately depend upon measures which are longer ranged and more elusive than those described in this booklet. The student's development of a prositive self-concept, his actualization of potential, and his contributions to society may very well be the most valid measure of the success of a gifted program.

OVERVIEW AND CAUTIONS

The materials on the following pages describe three basic approaches to evaluation of educational programs: (1) product evaluation, (2) process evaluation, and (3) presage. Each method has its own strengths and weaknesses; but when applied to assessment of programs for the gifted and talented, there are special cautions and limitations which ought to be noted.

I. Product Evaluation

Product evaluation usually is concerned with measurement of such things as student gains in achievement or other areas of growth and change in student behavior. It is this sort of information that is popularly thought of as "hard data," incontrovertible evidence that a change has or has not occurred as a result of some sort of educational intervention. In actuality, however, this type of assessment is fraught with all sorts of pitfalls for the unwary. A full discussion of many of the difficulties of product assessment can be found in the technical books and articles on measurement and research design listed in the bibliography in the last section. At this point, however, a brief review of some of the problem areas should suffice to alert the interested evaluator.

One problem lies in the area of research design. It is difficult to be certain that the measured growth was really caused by the special program unless a control group has also been measured. It could very well be possible that two or three years of academic growth in a single year could have occurred even among gifted students not in the special program, simply as a result of their extraordinary learning abilities. In a one-group design, it is also possible that improvement could be due to the effects of special attention, the skills of a different teacher, or other extraneous factors. It goes without saying that most evaluations enjoy nothing near the ideal experimental design. Giving a pre-test and post-test to a single group can, therefore, yield results that are nearly impossible to interpret correctly.

A second problem associated with product evaluation is the appropriateness of the testing instruments that are used. The usual achievement and general aptitude tests do not do a very accurate job of assessing the high-level objectives and unique learning experiences that characterize programs for the gifted and talented. In such programs, there is typically more emphasis on higher cognitive abilities, creativity, problem-solving, judgmental abilities, and upper range effective and non-cognitive concerns such as attitudes, interests, and values. Tests which measure global, general achievement on the lower cognitive levels of knowledge and memory can hardly be expected to assess the many specific and unique objectives of gifted programs in an appropriate way.

Other problems arise in the area of technical considerations. Most of the available tests have norms which are based on average population samples, and thus may be inappropriate for use with gifted children. The ceilings on the tests may be too low to provide much meaningful information on gifted children. Further difficulities will be, of course, encountered if in an effort to avoid the ceiling problem, gifted elementary-aged children are given tests appropriate for high school students.

It should be remembered that many students entering gifted programs are already operating at very high levels compared to their age-mates. The selection criteria may be based on achievement scores above the 90th percentile, and it would not be uncommon to find students close to the test ceiling at the start of the year. Certainly it would be difficult to show much gain in percentile points at the end of the year for such students. Indeed, progression from 98th to 99th percentile might require as much effort, in terms of test items correct, as a progression from 50th to 84th percentile, since each of these gains represents the length of approximately one unit of standard deviation.

Sometimes, even when other conditions such as good research design and appropriate instrumentation have been met, a problem may be encountered in measuring change by the use of gain scores. It is not sufficient merely to subtract pre-test scores from post-test scores, since the amount of measurement error in the resultant gain score will be even greater than the amount of error in both pre- and post-test scores together. The result will be a highly unreliable measure of change.

One final caution ought to be noted: regression effects occur when any group which is selected on the basis of extreme scores is tested a second time. The poorest scorers look better the next time tested, whereas the highest original scores tend to look worse, or at least appear to make only small gains. Both groups, in effect, regress toward the mean. This purely statistical phenomenon makes it rather difficult to demonstrate large gains in programs for gifted children.

II. Process Evaluation

Process evaluation is sometimes resorted to in order to measure various aspects of ongoing student-teacher behavior. In programs for the gifted, it is appropriate to attempt to measure the quality of interactions in the classroom and the levels of thought processes and instructional questions. The major pitfall, however, lies in the area of accuracy of observations. Particularly troublesome is the problem of low observer reliability. Additionally, there is the possibility that the lesson being observed is actually a "showcase lesson" and not really typical of what happens every day. A possible way around these problems may be to use students themselves as the observers, as in the Class Activities Questionnaire.

III. The Presage Design

The presage design (as exemplified by aspects of the DESDEG model) attempts to estimate the quality of a program by assessing key variables beforehand, much as college admissions officers or personnel managers attempt to evaluate applicants on the basis of factors that are assumed to have a positive relationship with success in college or on the job. There is a jump in logic, however, from good input variables to good results. In fact, there may be little relationship. A lot depends, of course, on the selection of variables and the qualifications of the evaluator.

INSTRUMENTS FOR ASSESSING PROCESS:

FLANDERS INTERACTION ANALYSIS, CERLI MATRIX, AND CLASS ACTIVITIES QUESTIONNAIRE

A. FLANDERS INTERACTION ANALYSIS

The Flanders Interaction Analysis addresses the teaching process by promoting teacher sensitivity to their own teaching behaviors and understandings of how these behaviors affect classroom climate and individual pupils.

Flanders classifies classroom verbal interaction in ten categories, seven of which identify teacher talk, two concern student response, and one is silence or confusion. Under teacher talk the following items are used:

1. Accepting and clarifying student feelings
2. Praising or encouraging student behavior
3. Accepting and clarifying student ideas
4. Asking questions
5. Lecturing, giving information or opinion
6. Directions
7. Criticizing or justifying authority.

Items one through four are considered indirect teacher talk, items five through seven are considered direct teacher talk. Student categories consist of number eight as response to the teacher and number nine as student initiated talk. Category ten is used to identify silence or confusion.

The observer, who may be present in the classroom, or who may listen to a tape later, usually records the proper category from one to ten in sequence using time internvals of three seconds between each sample of behavior. This is done by recording the appropriate category number. After an observation session, the observer enters all category numbers in the form of tallies in a ten row by ten column grid called a matrix. The matrix reveals both quantification and patterns of verbal interaction. Data which is related to quantification includes the percentage of time consumed by 1) teacher talk, 2) student talk, and 3) silence or confusion.

The matrix, while summarizing the data found by the observer, also maintains some of the sequence. The teacher can see the patterns of his or her reaction to student response, to silence, or to student initiation. One may find answers to such questions as, "What behavior elicits what responses from students." The Flanders system does yield descriptive information about the teacher-pupil dialogue or process, but this information is not intended as an evaluation of teaching product. Value judgments or process may be made after studying the interaction matrix.

The system was developed and refined by Flanders in the early 1950's. Research indicates that above average achievement and positive student behavior appears to be related to certain kinds of teacher behaviors such as acceptance and clarification of student ideas, use of directions and criticism, amount of time spent talking, and the encouragement of student initiated talk.

Procedure of Analysis

The total analysis includes ten categories and the sequence of the categories. The initial work may be with the categories only and not the sequence. There are two methods of obtaining a sample:

1. Classify each separate sentence or parts of a sentence if it appears long and complex.

2. Classify each statement being spoken at three-second intervals.

It is suggested that initial work be done by the separate sentence approach, and that the change to the three-second approach be done after the person is familiar with the categories. Meaningful feedback is accomplished either way. However, if the person wishes to relate the results of his analysis to that reported in the research literature, then the three-second interval and sequential tabulation must be used.

Some points to remember:

Rule 1. When not certain in which of two or more categories a statement belongs, choose the category that is numerically farthest from category 5. This is true except when one of the two categories in doubt is category 10, which is never chosen if there is an alternate category under consideration.

Rule 2. If the primary tone of the teacher's behavior has been consistently direct or consistently indirect, do not shift into the opposite classification unless a clear indication of shift is given by the teacher. This rule is often called the rule of the unbiased biased observer; that is, the observer is operating in a climate of general direct or indirect influence, and although he or she is ready to move to the opposite set of categories, he or she must feel that the teacher has definitely moved to the opposite type of influence before he or she is willing to grant a change in interaction pattern.

Rule 3. The observer must not be overly concerned with his own biases or with the teacher's intent.

Rule 4. If more than one category occurs during the three-second interval, then all categories used in that interval are recorded. Record each change in category. If no change occurs within three seconds, repeat that category number. (Applies only if three-second type of analysis is underway.)

Rule 5. If a silence is long enough for a break in the interaction to be discernible, and if it occurs at a three-second recording time, it is recorded as a 10. (This rule is listed because observers tend to ignore short periods of silence.)

Reference: The Role of the Teacher in the Classroom, 1963. Amidon, E. J.; Flanders, N.A.; Amidon, Paul S. and Assocation, Inc., Minneapolis, Minnesota.

SUMMARY OF CATEGORIES FOR CLASSROOM INTERACTION ANALYSIS

TEACHER TALK

INDIRECT INFLUENCE

1. ACCEPTS FEELING - Accepting and clarifying the feeling tone of the students in a non-threatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included.

2. PRAISES OR ENCOURAGES - Praising or encouraging student action or behavior. Jokes that release tension, not at the expense of another individual, or saying "ohhuh?" or "go on" are included.

3. ACCEPTS OR USES IDEAS OF STUDENT - Clarifying, building, or developing ideas or suggestions by a student. As teacher brings more of his or her own ideas into play, shift to category five.

4. ASKS QUESTION - Asking a question about content or procedures with the intent that a student answer.

DIRECT INFLUENCE

5. LECTURES - Giving facts or opinions about content or procedures, expressing his or her own ideas, asking rhetorical questions.

6. GIVES DIRECTIONS - Directions, commands, or orders with which a student is expected to comply.

7. CRITICIZES OR JUSTIFIES AUTHORITY - Statements intended to change student behavior from non-acceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he or she is doing, extreme self-reference.

STUDENT TALK

8. STUDENT TALK-RESPONSE - Talk by students in response to teacher. Teacher initiates the contact or solicits student statement.

9. STUDENT TALK-RESPONSE - Talk by students which they initiate. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he or she did, use this category.

10. SILENCE OR CONFUSION - Pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the observer.

B. CERLI MATRIX*

The Cerli Matrix, prepared under William M. Rogge, is an observation system with two dimensions. In one dimension are four simple and easily understood process steps:

1. SEEK or ask for information on contributions (S)
2. INFORM (I)
3. ACCEPT responses, either directly or indirectly through elaboration (A)
4. REJECT responses (R)

The other dimension covers major aspect of content:

1. COGNITION - memory items where no obvious relating of ideas or items is involved (C)
2. PRODUCTIVE thinking where some relating of ideas or items is involved. (P). Three major types are involved: convergent - where one "right" answer exists, divergent - where several answers are acceptable, and evaluation - which involves a judgment based on the person's own value system.
3. EMOTION of the moment (emotion that occurred at earlier times is recorded as cognition - memory) (E)
4. MANAGEMENT involves any immediate changes in teacher-student-student relationships (M)

The two dimensions make up a 4 x 4 matrix with single letters to serve as Code designations for each cell. As these behaviors occur they are checked in the appropriate box:

CONTENT

		C	P	E	M
	S				
Process	I				
	A				
	R				

Thus, the upper left hand cell is designated as SC. The lower right one as RM.

---

*Materials in this section are derived from Independent Study: A Model of New Teacher-Student Relationships for Talented and Gifted Children by W. M. Rogge, Department of Program Development for Gifted Children, State of Illinois, 1968.

Illustrations of each cell are given below:

SC: Who discovered America?
What is your opinion?

SP: What are some answers to the equation, - + - = 4?
What season of the year provides the most fun? Why?

SE: What do you feel about death?
Would you like to kick him, would that make you feel better?

SM: Shall we dismiss class early today? (Asked seriously, of course.)
Who wants to give the first speech?

IC: My opinion is . . . (not IE, as no immediate feeling is yet evident)
The answer is . . .

IP: 2 + 2 and 1/2 + 3-1/4 are two illustrations out of many possible illustrations of answers to the question, - + - = 4.
The evidence to support my opinion is . . .

IE: I feel like crying.
My happiness cloaks me as a gossamer thread.

IM: Open your books to page 3.
John, please talk to me.

AC: That's a good answer.
Yes, I can see how your method would work with metal as well as wood.

AP: Your theory would also explain how the razor blade would float when it was broken into small pieces.
Your answer gives me another idea.

AE:

AM: (In response to a raised hand) John, you may answer.
I'm willing to stop class early because of the good case you made for the decision.

RC: Stupid.
Try it again (if the answer suggests a way out, don't score it as RC). An illustration: "Here is another way that may work."

RP: You should have given that more thought.
Your answer misses my point.

RE: Stop the crying.
Who cares what you feel about arithmetic. We all have to do it like many distasteful things in life.

RM: John, put down your hand.
I didn't ask you to close your books as yet.

C. CLASS ACTIVITY QUESTIONNAIRE (C. A. Q.)

The C. A. Q. (Class Activities Questionnaire by Joe M. Steele, Optical Scanning Corporation, Newtown, Pennsylvania, 1969) instrument is based on Bloom's educational objectives in the cognitive domain, proceeding from the lower thought processes to the more complicated or higher thought processes. It is also concerned with classroom focus and classroom climate. It includes a thirty-item questionnaire given to both teachers and students. There are no right or wrong answers. Teachers are asked to indicate areas of emphasis. Students agree or disagree on various kinds of activities in which they are involved. These factors reveal a profile of the class as well as its purposes. It may also assess whether the teacher is an information giver with students assuming a passive role, or whether students have an active role with the teacher functioning as facilitator.

The following model is adapted from C. A. Q. for use on a sixth-grade level in the Ellington program for the academically talented student.

ELLINGTON PUBLIC SCHOOLS - PROGRAM FOR ACADEMICALLY TALENTED
CLASS ACTIVITIES QUESTIONNAIRE
(adapted from C.A.Q. by Joe M. Steele)

DIMENSIONS	FACTORS	BRIEF DESCRIPTION
LOWER THOUGHT PROCESSES	1. Memory:	Activities calling for recall or recognition of information presented.
	2. Translation:	Activities calling for paraphrasing or expressing information in a different symbolic form.
	3. Interpretation:	Activities calling for recognition of relationships and seeing implications of information.
HIGHER THOUGHT PROCESSES	4. Application:	Activities calling for selection of appropriate methods and performance of operations required by problem situations.

DIMENSIONS	FACTORS	BRIEF DESCRIPTION
	5. Analysis:	Activities calling for recognition of the structure of material, including the conditions that affect the way it fits together.
	6. Synthesis:	Activities calling for the generation of new ideas and solutions.
	7. Evaluation:	Activities calling for development and application of a set of standards for judging worth.
CLASSROOM FOCUS	8. Discussions:	Student opportunity for and involvement in class discussion.
	9. Test/Grade Stress:	High pressure to produce teacher-selected answers for a grade.
CLASSROOM CLIMATE	10. Enthusiasm:	Student excitement and involvement in class activities.
	11. Independence:	Tolerance for and encouragement of student initiative.
	12. Divergence:	Tolerance for and encouragement of many solutions to problems.
	13. Humor:	Allowance for joking and laughter in the classroom.
	14. Ideas Valued:	Ideas are seen as more important than grades.
	15. Ideas Enjoyed:	Subject matter is seen as interesting and enjoyable.
	16. Teacher Talk:	Proportion of class-time consumed by teacher talk.

MEMORY	TRANSLATION	INTERPRETATION	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
+	+	+	+	+	+	+
0	0	0	0	0	0	0
-	-	-	-	-	-	-

+ = factor was stressed, 0 = undecided, - = factor was not stressed.

The graph displays the findings of a questionnaire designed to reveal whether or not a student felt that the factors listed above were stressed in the program.

Comments:

ELLINGTON PUBLIC SCHOOLS
ELLINGTON, CONNECTICUT

PROGRAM FOR ACADEMICALLY TALENTED

Note: The following questionnaire, as used in the Ellington Program, is designed to collect data from students on sixteen specific areas outlined in the model. The instrument is an adaption of the C.A.Q. by Joe M. Steele.

STUDENT QUESTIONNAIRE

NAME____ DATE____________________

GRADE____________________

Please circle either Yes or No after each statement:

1. I am expected to remember or recognize information in this program. Yes No
2. There is little opportunity for me to participate in discussions. Yes No
3. A central concern is practicing methods in life-like situations to develop skill in solving problems. Yes No
4. My major job is to make judgments of good/bad, right/wrong, and explain why. Yes No
5. Staudents do not enjoy the ideas studied in this class. Yes No
6. Great emphasis is placed on memorizing. Yes No
7. Students are encouraged to independently explore and begin new activities. Yes No
8. Great importance is placed on logical reasoning and analysis. Yes No
9. I am expected to go beyond the information given to see what is implied. Yes No
10. I am encouraged to discover as many solutions to problems as possible. Yes No
11. Great importance is placed on explaining and summarizing what is presented. Yes No
12. Inventing, designing, composing, and creating are major activities in this program. Yes No

13. I am expected to read between the lines to find trends and consequences in what is presented. Yes No

14. Students are excited and involved with class activities. Yes No

15. I am urged to build onto what I have learned to produce something brand new. Yes No

16. Restating ideas in your own words is usually required. Yes No

17. The ideas studied in this class are more important than grades. Yes No

18. We actively put methods and ideas to use in new situations. Yes No

19. I have to work harder for grades because I am in this class. Yes No

20. Using logic and reasoning processes to think through complicated problems (and prove the answer) is a major activity in this program. Yes No

21. There is very little joking or laughing in this class. Yes No

22. My major job is to make judgments about the value of issues and ideas. Yes No

23. The class actively participates in discussions. Yes No

Circle one:

24. On the average, the teacher talks how much of the time?

A. 90% B. 75% C. 60% D. 40% E. 25% F. 10%

PRESAGE DESIGN: DESDEG

PRESAGE

Diagnostic and Evaluative Scales for Differential Education for the Gifted*

The DESDEG model is offered as one method for determining the presence and quality of characteristics essential for the success of a gifted program:

> "Although certain aspects of both product and process measurement are implicit in the evaluative instrument, the work may generally be classified as a 'presage' model because it does not depend mainly on the measurement of educational products such as student achievement or interest, or on processes of learning or instruction as the main source of evaluative data. Rather, the various dimensions of the instrument focus primarily on a carefully selected group of program variables that were determined through empirical means individually to be the most necessary and collectively to be a sufficient composite or program features to comprise a valid representation of the whole. Reiterating for the sake of clarity, these program characteristics have been designated as 'Key Features', and the five program characteristics so identified are used in the instrument as central subdivisions around which the evaluation activity proceeds."

Evaluation of the Key Features occurs when one applies a set of fifteen program requirements, one or more of which is under each of the five Key Features. Each one of the program requirements is deemed essential and they collectively comprise a sufficient set of practices to govern the program. It is recognized that few programs will attain the ideal stature specified in the criteria; however, the existence of upper limits of excellence toward which all efforts should be directed is an obvious purpose.

Each program requirement serves as a focal idea around which a set of five scale standards has been developed. The five degrees of quality are ideal, superior, commendable, neutral, and negative. Numerical values are fixed to each scale standard from a plus three for ideal to a minus one for negative. Thus a sum of scores attained for each PR is also identifiable in a total score to yield a designation ranging from ideal to negative.

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*Renzulli, J. and Ward, V. Diagnostic and Evaluative Scales for Differential Education of the Gifted, 1969.

Each key feature (KF) and its program requirement (PR) follows:

KF	#1	Philosophy and Objectives
PR	#1	Existence and adequacy of the document
PR	#2	Application of the document
KF	#2	Student identification and placement
PR	#3	Validity of conception and adequacy of procedures
PR	#4	Appropriateness of relationship between capacity and curriculum
KF	#3	The Curriculum
PR	#5	Relevance of conception
PR	#6	Comprehensiveness
PR	#7	Articulation
PR	#8	Adequacy of instructional facilities
KF	#4	The Teacher
PR	#9	Selection
PR	#10	Training
KF	#5	Program Organization and Operation
PR	#11	General staff orientation
PR	#12	Administrative responsibility and leadership
PR	#13	Functional adequacy of the organization
PR	#14	Financial allocation
PR	#15	Provision for evaluation

In order for evaluators to arrive at the judgments required in the evaluative scales they must have a thorough knowledge and understanding of the program being evaluated.

Basic Information Forms are used to provide an inventory of all factual information that might have a bearing on final judgments and recommendations which they must make. The forms have been designed to be completed by persons within the program, and they require a minimal amount of interpretation on the part of persons providing the data.

There is an Evaluator's Workbook which is intended to assist the evaluator in processing information derived from the Basic Information Forms, and from observations made while visiting the program.

The workbook contains suggestions to the evaluator about arriving at judgments for each of the program requirements. It includes data to scale values, methods of inquiry, and examples of circumstances that may lead to special consideration in assigning scale values to certain areas of the program.

The Summary Report is organized into sections so as to allow evaluative findings and recommendations to be made in relationship to key features and program requirements. An area for a narrative summary and recommendations for each of the program requirements should contain a statement telling why the rating was given, and suggestions for action to bring about an improvement in the program requirements. Provisions are also made to point out the strongest features of the program.

TWO COMPREHENSIVE MODELS FOR PROGRAM EVALUATION:
EASH MODEL AND KEY FEATURES

24

ISSUES IN EVALUATION AND ACCOUNTABILITY IN SPECIAL PROGRAMS FOR GIFTED AND TALENTED CHILDREN

Maurice J. Eash

(Permission granted for use by Connecticut State Department of Education, September, 1972.)

Accountability and evaluation have become code words for a pervasive public sentiment that investments whether in material goods like automobiles or social goods like education should return due value. That bumpers don't fend off bumps or education does not educate is viewed as a failure of producers being held accountable for making good on the promised performance of their goods when the consumer made a commitment of good faith in the producer's initial claims. Evaluation enters into this dispute as a process which checks the goals obtained in a program against the goals promosed. However, evaluation is more determining the amount of agreement between goals, just as consumer protection is more than a haggle over a fair price. In the large they culminate in philosophical differences, the necessity of ordering values along some priority, and the expansion of considerations to whether the goals were worth pursuing. How goals were selected, what shifts were made from the initial formulation and what trradeoffs were made in selection of these goals against other possible alternatives become evaluation questions of concern equal to the question of whether the goals promised were the ones delivered.

Special programs, in this case educational programs for the gifted and talented, pose special problems in evaluation to determine accountability. Accountability is integrally tied up with evaluation in the need for obtaining trustworthy data that prompts agreement on the reality it represents, thus the resolution of central issued in evaluation and accountability is a critical consideration in the long range funding of programs for the gifted and talented. This paper examines three issues and suggests guidelines for their resolution by the program planning and funding agencies. The three areas of issues in evaluation are: (1) What are appropriate frameworks for field evaluation as they relate to special educational programs? (2) What approach to evaluation methodology is comprehensive and recognizes the necessity for several levels of evaluation? (3) What role might granting agencies serve in rendering more intelligible the relationship between broad areas of accountability and the evaluation research that makes accountability a valuable and generally accepted constituent of every program?

A Framework for Field Evaluation of Special Programs

Special programs present particular evaluation problems inasmuch as they are often innovative and developed within field settings as opposed to a more controlled environment. Neither of these conditions preclude the use of an evaluative research, but they set forth methodological problems for program administrators, project evaluators and granting agencies, which, if not reconciled, are a continuous source of antogonism which seed conflict and interfere with efficient program functioning.

Programs which are established under the rubric innovation often lack special definable objectives that are deemed necessary in evaluation research. Thus, if the evaluator or granting agencies insists on ready made specific objectives which serve as the instant source of criterion measurements for the worth of a program, innovation becomes sacrificed to meeting this demand, or a climate of duplicity between program developers and evaluators prevails. Therefore, field programs dubbed innovative must have the option of evolving further objectives and clarifying initial objectives as the crucible of experience sheds light on new educational processes and dispels previous assumptions of the program staff. These more flexible program requirements make demands on evaluators to help clarify objectives and trace their evolution as well as to design evaluation of objectives stated at the beginning of a project. In this respect the framework of a field evaluation differs most radically from a laboratory research project with comparatively fixed goals and the researcher's task to prove or disprove hypothesized relationships. In most innovative programs the state of knowledge permits some conjectures on relationships; however, the specification of variables and their relationships is usually not possible with any degree of prevision. Thus the program evaluator must recognized these differences (which are discussed at greater length under the heading of differential evaluation, and must use a conceptual scheme to select appropriate evaluative procedures and to guide the collection and analysis of data. As suggested below, this means placing the program along a continuum determined largely by the degree of formalized objectives that specify the relationship of variables and the clarity of these relationships, the interaction of theoretical constructs, and operational descriptions. Table 1 presents a continuum with these three points designated. On the continuum, three models are described: the initiatory, the developmental, and the integrated model. In the initiatory model the planning of goals, specifications and operations are the major processes. In the developmental model the actual construction and testing of a program in a field operation are the chief characteristics. In the integrated model the program is clear on its goals, can predict with reasonable accuracy the outcomes and generates evaluation data for internal adjustments. These are defined in Table 1 and a sample description is given of a program at each model stage.

An evaluator can be useful at any of these stages, but he/she will need to frame his/her evaluation questions and methodology in recognition of the stage of the program model.

Differential Evaluation

Once the various models are recognized as being distinct phases in program development, the evaluation designs needed to collect and compare data can be drawn. As the descriptions in Table 1 indicate, the evaluation, while important at each stage, does present different issues and subsequently shifting demands on the evaluation design. In the initiatory model, an evaluator would be more concerned with analyzing the functioning of the committee and making recommendations for their future work than gathering data on the tentative paper program. Some representative and specific questions which an evaluator would raise are shown in Table 2. Recognizing the varying emphasis and demands on evaluation and linking it to a model of program development calls for differential evaluation rather than the applciation of a standard set of tools to a situation. In a similar view the focus of the accountability will shift with the data under consideration. Table 2 carries an example of differential evaluation executed along the three dimensions of effort, effect, and efficiency in the program model. Table 2 should be read in conjunction with Table 1 for the evaluation questions on each of the three dimensions of effort, affect, and efficiency should elicit data which when put together begins to give a coherent picture of the models, its main constructs and its functioning. Note that one question by itself is not decisive but together the questions combine to allow an evaluator to make comparisons and decision-makers to judge accountability.

Each dimension of evaluation has some common characteristics, but seeks different data given the stage of the program model. As an example, within the dimension of effort, the evaluator should know how time is spent, since time is one of the costly ingredients in program development. How the staff spends time on areas which relate directly to delivery services and concentrating program effects, is an especially critical question in the developmental and integrated models.

The determination of the program's effect has been the primary concern in evaluation and research. Product evaluation has usually concerned itself with effects, but as the reader will note the initiatory model does not have a product emerging from the intended clients of the program. Therefore, the questions in the initiatory model call forth data on the process of model development, and there are few outcomes from the model to study. As the program model moves further toward becoming an integrated, fully developed model, the emphasis on evaluation of products and other outputs of the model increase. In the evaluation of an integrated model the attainment of goals and their congruence with original goal formulations, the most conventional definition of accountability is mroe closely followed. Equally important is the attribution of effects to specific program components and activities. In order for these relationships to be ascribed, it is necessary to delineate a program model and be able to guarantee a degree of consistency of functioning. These control factors are usually achieved in the developmental model where the definition and description of the main constructs are distilled from the experience of operating the model and observing results. Without the specifification, consistency of functioning and agreement on the reality of the basic constructs, attribution of effects to the models specific functioning is largely spectulative. For example, in the developmental model described in Table 1, the improvisation of program by teachers rules out the study of specific instructional treatments of gifted children. If an original objective is to explore student aptitude and instructional treatment interactions on achievement, this is precluded until the developmental model defines and stabilizes the teaching, recognizing, of course, the need for other routine controls as well.

Because field settings lack control which is available within a laboratory, a program produces unanticipated effects. These may be obvious or subtle, and the staff through their long association with the program may accept them without awareness of how they have redirected the originaal aims of the program. In one instance outside evaluation of a program for learning centers for remedial work in elementary schools found the students had over a period of time rearranged their schedules to spend more time in self-programmed activities in learning centers than in any other single classroom subject. While one may applaud this management of instruction, a study of students' records found that students were not using the learning center as it was designed for remedial work in areas of greater weakness. Over time the program had been diverted from its original goal of providing special assistance in areas where students needed extra academic work to one where students pursued immediate interests. Hence the evaluator will need to study unanticipated effects as well as direct effects in relating outcomes to intended goals.

Efficiency relates the efforts and resources committed to the effects achieved. Usually these are recorded in some cost-benefit statements. Again, as in the other two dimensions, the focus of the evaluator and the data collected will be related to the stage of the program model. In the initiatory model the emphasis will be on process data as the developmental model or integrated model is planned. As the model becomes operationalized, the evaluation for efficiency shifts toward assessing the relationships of effort and effect as they are reflected in the models output, in this case the delivery of an educational program to talented and gifted students. Evaluation is frequently defined as a fair comparison, and within each dimension the data is eventually compared with other data for a basis of judgment. Sometimes the comparisons are made of the same groups over time, much as one might compare his own income tax returns to chart his economic progress over a period of years. The other usual evaluation procedure is to compare one group with another group. Staying with the individual income tax analogy, one might compare his income to a group of people with similar educational attainment, place of residence or occupational status. In the example in Table 2, the program is compared with other programs within the school district and with similar programs in other school districts. In the development of new programs in education, integrated models are rare. Typically, federal funding for innovation has been to stimulate initiatory or developmental models often terminating funding before the integrated models were produced. Development has suffered further from the failure to distinguish between these three models. As a consequence the evaluation designs have subjected initiatory and developmental models to accountability demands that were appropriate for integrated models. What were thus deemed deficiencies by the evaluation data may only have been developmental growing pains as the models were not at a stage where the effects as a product outcome were ready to be assessed. Under this plan of recognizing and allowing for stages in educational program models, the evaluation designs for insuring accountability will assume forms associated with the present stage of the educational model and not rely on only one data category, product outcome, to assess all program models. Accountability thus becomes at the initiatory stage a formulating and carrying out of an evaluation design which lays bare the process and progress of the planning venture and permits a degree of comparison with other similar efforts. The client for evaluation finding at this stage is the body doing the model building. At the developmental stage accountability shifts heavily to data which will give an assessment of the outcomes of the program as compared with original intents and other similar programs. The emphasis of each of the dimensions and foci of differential evaluation is the relating of evaluation design and emphasis to program models.

In the light of past confusion on the functions of evaluation and its relationship to accountability, the above conceptualization can be constructive. A list of guidelines which would assist funding agencies in orienting program developers and also extend the usefulness of accountability to both the funder and the funded follows.

Evaluation Guidelines and Funding Agencies

1. Innovative program proposals should designate the type(s) of models they will fashion. If they are using an initiatory model they should be required to construct a time sequence for advancing to a developmental model and to an integrated model. In special programs for the gifted, some proposals can bypass the initiatory model and proceed to a developmental model through utilizing available data on extant programs as a basis for construction of a model.

2. Program proposals should relate the three dimensions of evaluation: effort, effect, and efficiency to the program model. The evaluation design should reflect the dominant characteristics of the program model. This means that the requirement of accountability given recognition to the need for different emphases in the to the evaluation design. In the initiatory model the three dimensions of evaluation focus primarily on the organizational structure as the data source and the client. The evaluation data should assist in improved formulation and increased effectiveness in model building. In the developmental stage the focus of the evaluation design shifts more to the program model, and its clients, the students and product outcomes become of greater concern. In the integrated model, the evaluation design centers on the model as a defined program. Selected from a range of alternatives it is judged on how well it attains its professed goals and how it compares with other programs. Special program proposals for the talented and the gifted will contain appropriate comparison procedures and relate costs to benefits.

3 Program model proposals will contain a comprehensive design for evaluation and relate this design to accountability. The evaluation designs will become a functioning part of the program model and render data on performance to decision makers within the first year of functioning. The evaluation design should parallel the program model design on a time line, reflecting the changes in the model and the corresponsing demand for different evaluative data. Program models for programs for the gifted and talented would use a variety of measures in assessing congnitive, effective and context changes in the students and organization.

4. The evaluation design should render data that will aid decision makers at several levels. As an integral part of the functioning program model, the data should assist the active participants in the model as well as those who sit as gatekeepers on resources that give sanction to the program. Therefore, in carrying out the evaluation designs there will be an interplay between the evaluator and the program model participants as well as between the evaluator

and the gatekeeper. This transactional use of evaluation will aid in developing evaluation skills in program participants, encourage widespread use of evaluative data, and assist the evaluator in grounding his design in the reality context of the project.

5. Since transactional evaluation involves a close association of evaluator and evaluated, provision for outside evaluators to assist with perspective should be made. The program proposal should make provision for an inside evaluator and establish some criteria for selection of an outside evaluator. Of primary concern is the relating of evaluation and accountability for the program model in a continuous fashion - directing it always to clarify and improving the alternatives in the educational programs for the special target population, in this case gifted and talented children.

Accountability cannot be divorced from evaluation and will be moved from the area of subjective judgment to the extent that appropriate evaluation methodology is brought to bear. Suspicion of evaluation surfaces where data is remote from direct usefulness to the practioner and becomes viewed as a coercive weapon to structure behavior. However, decision-makers at all levels need accurate evaluation to form judgments whether gatekeepers or field practioners. Differential evaluation geared to a series of models of program development assists in resolving some of the issues that detract evaluation from playing a more viable role at several levels of decision-making in the search for improved educational programs, which is the goal of all those who demand accountability. With the application of appropriate evaluation procedures as suggested in this paper, accountability can be rendered more directly as evaluation becomes more useful to all participants, be they school boards, professional practitioners or the recipients of an educational program.

Table 1

Three Levels of Program Models in Special Programs for Gifted and Talented

INITIATORY MODELS	DEVELOPMENTAL MODELS	INTEGRATED MODELS
Models are vague, intutitive in effects to be achieved. Objectives are stated as general outcomes and social goods to be achieved. There is much concern with theory. The debates on alternatives are theoretical rather than operational or data-based. Justification of the program may be drawn from analogous programs in other contexts or be based on philosophical assumptions. Details for operationalizing the proposal are sketchy.	Models, where a mixture of objectives prevails. Macro objectives give general guidance and some micro objectives are defined. Objectives still seem to be shifting and the model still takes different forms in individual staffs descriptions. There is more concern with operational alternatives than a given alternative. While the program is operating there are many unknowns and frequently considerable improvisation. being assessed and the range of effects are capable of being attributed to the program treatment.	Models, have specific objectives to be achieved. There is monitoring of procedures for consistency of operation. Relationships of treatment (what is done educally) and effects (outcomes) are specified, and reproducibility is enhanced by elaborated descriptions of the model in operation. Logical relationships are explicated, and empirical data are being collected. The outcomes are
Precis of a Program	Precis of a Program	Precis of a Program
A special program for gifted and talented children is drawn up. Decisions on the form it will take; special classes, enrichment, independent tutorials or the mix of these are still open. There is a lack of agreement on definition of clients.	One special program for gifted talented children has been underway two years. Fifty children are involved. In some cases teachers nominate students for the program, in others they are selected on basis of test scores. The first year students spend four	A program for gifted and talented students have been in operation for five years. Open-ended instruction is featured with teachers and students cooperatively planning the curriculum for three months at a time. The Director of Research for the

Table 1
(continued)

Precis of a Program	Precis of a Program	Precis of a Program
Who is a gifted or talented student? How should he/she be educated? Should he/she be identified? At what grade? By whom? Will there be extra monies allocated to the education of these students? Will there be a need to establish a separate administrative unit for this program? What type of research will be conducted on a program? When will parents be involved? A committee has been set up to resolve some of these issues. Administrative responsibilities and a sum of money for planning have been allocated. The committee has been meeting for one year, a set of minutes, a list of consultants and a description of the field trips to visit programs for gifted children exists.	hours per week in the program, the second year this has been extended to six. The program has focused on scientific interests though there is concern about including more humanities. One teacher made arrangements for 25 of the students to see the Old Vic perform at the local college. Some data, mostly of a descriptive nature has been collected on the students, their achievements and the program. Teachers do not have fixed style for instruction, the instruction reflects personal teaching style.	school district monitors the program through teachers' records, student interviews and regular classroom visitations. Program outcomes are investigated through their effect on student's achievement and interest. A contrast group of students, not in a special program, in a neighboring school district with a similar student body is supplying comparable data on achievement and interest. A further dimension of the study supplies data on special programs' influence on the regular program. At the end of the five years a summer workshop composed of teachers and pupils in the program in conjunction with administrators and university consultants will draw up the program description for the next three years. Decisions will be rendered on the program organization, the selection and retention of students and the research to be conducted.

Table 2

Differential Evaluation in Three Program Models

INITIATORY MODEL	DEVELOPMENTAL MODEL	INTEGRATED MODEL
EFFORT		
1. What have been the main directions of the committee's efforts?	1. What have been the main thrusts of the program's efforts?	1. What are the major goals the program is trying to attain? Who is involved in the effort?
2. What has been the level of participation among the committee members?	2. What objectives have received the major attention?	2. What percentage of staff and student time is committed to the program? Total time?
3. Has the committee broadened its constituency and recognized the socio-political aspects of its efforts?	3. Who has been involved in the program, to what extent, voluntary or mandated, volunteer or paid?	3. What data are available that permit building a history of the effort and projecting a scenario for future thrusts?
4. How much time has been spent on certain phases of the program?	4. Where has the support for the program emanated; what has been the total developmental costs - financial and psychic?	4. What areas of effort are perceived as worthwhile by the different role participants?
	5. How much total time has been spent? What parts of the program are consuming the bulk of time?	
EFFECT		
1. What is the level of knowledge manifested in the committee on special programs for the gifted and talented?	1. What data on functioning of the program have been collected or can be collected?	1. What are the program short-range effects on students to the program, students not in the program, teachers, parents and administrators? Are data available to study both process and product effects?
2. Are the committee members conversant with issues, trends and programs?	2. What have the effects been on program students, other students, teachers, parents and administrators?	

Table 2
(continued)

INITIATORY MODEL	DEVELOPMENTAL MODEL	INTEGRATED MODEL
EFFECT (continued)		
3. What is the present stage of the plans, are they near operationalizing?	3. Has the data on effects been used to modify or shape the program, explore alternatives?	2. Is any provision made for studying long range effects.
4. What are the main impediments to formulating a developmental model program?	4. Can the effects on students be attributable to the program?	3. Can the desired effects stated in the original goals be attributed to the program?
	5. Have there been any unanticipated effects?	4. Have there been any unanticipated effects?
EFFICIENCY		
1. Does the committee have an organized plan for carrying out its work, with deadlines and completion schedules for phases of activities?	1. Are there records or other evidence that program problems are being systematically encountered and resolved?	1. Are problems systemetically studied? Are the participants coversant with the decision-making process? Has it been scrutinized?
2. Is the committee clear on its responsibility to the Board of Education and superintendent?	2. How does the cost on this program compare with costs on other programs in the district and in other districts?	2. What is the cost of this program compared with other programs in the district and similar programs?
3. Given the amount of time and money invested has a useful product emerged?	3. What goals seem within attainment? What goals have not been attained.	3. How do these costs project out for the future now that developmental costs are large - met?
	4. Given the programs' experience what will be the approximate cost of an integrated program model?	4. What has been the cost of attaining certain effects, what tradeoffs were made in the interest of cost?

KEY FEATURES:
A PRACTICAL MODEL FOR PROGRAM EVALUATION

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Renewed interest in educational evaluation has resulted in the recent development of a variety of new models for assessing the quality of instructional programs. Although many of these models represent significant advances in the science of evaluation, administrators and teachers often find them too complicated for practical application without the help of highly trained specialists.

We propose to describe here an evaluation system that a curriculum director -- in fact, any educator interested in conducting a program evaluation -- can use as a comprehensive, yet easy-to-apply model wherever need may arise for assessment leading to modifications to program organization and operation. We call it the Key Features Model.

Advantages

We believe the Key Features Model has many advantages over others now in common use. To mention only one, the currently popular behavioral objectives model has proved to be appropriate for the assessment of relatively specific student performance, but its emphasis on achievement gains in traditional academic areas limits the kinds of decisions that can be made from the information it supplies. Suppose, for instance, that certain curricular materials or instructional methods are producing teacher discontent, which is having a negative impact on classroom atmosphere and, in turn, on student attitudes and performance. Now, although this teacher discontent may be reflected in the student achievement gains (or lack of them), the behavioral objectives model for evaluation does not provide a mechanism for pinpointing the source of the trouble through direct feedback from the teachers themselves. Thus, an evaluator using the behavioral objectives model may be able to conclude that students are not achieving according to some predetermined expectation, but his data will not help him find out why they are not making the expected gains.

The Key Features Model, however, would almost surely disclose the real difficulty (teacher discontent) in our hypothetical case, because it requires the evaluator to investigate all the relevant factors bearing directly or indirectly on a particular program's effectiveness. Accordingly, although this model reflects a concern for behavioral objectives and student achievement, it also takes in other important sources of information most helpful for decision-making. Let's examine it more closely.

Basic Dimensions

The model's essentials are: Key Features, Prime Interest Groups, and Time. Key Features are major factors or variables that contribute to the success of any educational program. The evaluator using this model must first -- before he begins to gather data on the program's effectiveness -- determine which factors (key factors) influence the program operation and contribute most to an understanding of it. Making this determination is probably the evaluator's most important task, but he can do it in a relatively short time if he can enlist the help of persons representing various prime interest groups.

Prime Interest Groups consist of people who have some interest, direct or indirect, in the program to be evaluated. Obviously, such groups will almost always include students, teachers, and parents: but, depending on the nature of the program, they may also involve college admissions officers, prospective employers, and members of boards of education, state departments of education, and certification and funding agencies. One simple way to identify prime interest groups is merely to look at the program's general objectives and ask, "What groups are directly involved in this program or are interested in the students who will be completing it?" If, for example, it's a vocational education program, prime interest groups might include representatives of companies that may employ graduates of the program, members of appropriate trade unions, and persons from agencies responsible for examining or certifying skills taught in the program.

Identifying Key Features

The first step here is to ferret out the major concerns of each prime interest group. It's quite likely that all of the groups will share some of the same concerns, but each one will also have its unique interests. For example, parents, teachers, administrators, and board members would surely be interested in the levels of student achievement under a new social studies program, but administrators and board members would have, in addition, a particular concern about program expenses as these relate to the district budget. For their part, teachers would be interested in how much extra preparation time the new program may require and students might wonder how much emphasis on current social issues it contains. Thus it's basic to identify the real, relevant concerns of each interest group and to build the data-gathering effort around them.

The evaluator can identify key features by compiling "input" information from four main sources: written materials, questionnaires, interviews, and observation. He would first review all such documents as proposals, courses of study, previous evaluations, curricular materials, etc., and try to learn as much as he can about the general and specific objectives of the program and its mode of operation.

As a second source, he may use open-ended questionnaires that ask a small sample of each prime interest group to list their main concerns about the program. A good approach is simply to ask what each one would "look at" if he were evaluating the program. Whenever possible, questionnaires should be kept anonymous, and the instructions for completing them should make it clear that no attempt will be made to identify suppliers of information.

After he has reviewed program documents and the questionnaires, the evaluator will begin to get a "feel" for both the obvious and the subtle concerns of the various prime interest groups. Then he can proceed to the third step: arranging interviews with members of each group. Knowledge gained in the first two steps will help him ask meaningful questions about concerns expressed frequently. The success here, of course, will depend on how well he's able to gain the trust of his interviewers. He should guarantee their anonymity and make sure they understand his role as spokesman or ombudsman for those being served by the program.

Finally, the evaluator should observe the program in action, try to "get inside" it by viewing it from the perspectives of students, teachers, and members of other prime interest groups. Informal interviews and friendly chats will help him understand the day-to-day operation of the program and clarify or verify some of the concerns identified through previous input procedures.

At this point, the evaluator should be able to list the major concerns of each prime interest group. He should now classify these and list each category along the Key Features dimension of the evaluation model (see Figure 1). Similarly, along the Prime Interest Groups dimension he should list all those in any way concerned with the program, placing a check mark in each box that represents a possible source of evaluative data. For example, if both students and parents can contribute information on any "Student Attitudes Toward the Program," the evaluator should make check marks in the boxes where this key feature and each of these two prime interest groups intersect.

The advantage of listing all possible sources of data is that it creates an awareness of the various perspectives from which a program can be evaluated (Gooler, 1969). (Later, the evaluator can review the entire range of possibilities and select those he feels will contribute the most useful information.) Furthermore, the comprehensive overview will help the evaluator to avoid overburdening any one group with requests for evaluative data.

Appropriate Instruments

After identification of data sources for each key feature, the evaluator's next step is to select and construct instruments that will "deliver" the information required for decision-making. The type of instrument used to evaluate a given program may cut across measures of cognitive growth, effective growth, and classroom atmosphere, and may range from formal standardized tests to informal interview schedules. Careful selection and development of instruments for each key feature, data source, and time of administration are essential to an accurate, comprehensive evaluation. It's at this point that the evaluator must begin to translate previously obtained data into appropriate instrumentation.

What instruments are available? For measuring cognitive abilities, there are standardized achievement tests, tests of critical thinking, aptitude tests, and tests of problem-solving ability. There are fewer standardized tests for areas in the effective domain, but some rating scales and personality tests may be applicable in certain instances. Classroom atmosphere can be evaluated by use of such instruments as the Class Activities Questionnaire (Steele, 1969), the Observation Schedule and Record (Medley and Metzel, 1958), and Flanders' Interaction Analysis Procedures (1960). There are also standardized tests of creative thinking, such as the Torrance Tests of Creative Thinking (1966) and the Remote Associates Test (Mednick, 1967), as well as tests of artistic aptitude like the Design Judgment Test (Graves, 1948).

Nonstandardized tests, rating scales, questionnaires, interview schedules, and observation techniques are often included in the assessment of objectives for which no standardized measures exist. In constructing questionnaires and rating scales, the evaluator should try to take into account the concerns expressed by each prime interest group during the input phase. His major task here is to give accurate representation to each concern on one or more of the questionnaire items, and to determine the extent to which this concern exists within a large representative sample of each prime interest group.

Existing school records may influence selection of some instruments. For instance, if the evaluation design calls for standardized measurement of reading achievement and the school has already administered a particular achievement test in reading, it's reasonable to use those test scores as pretest data -- provided, of course, the test accurately reflects the objectives of the program under evaluation.

Special caution has to be exercised in using evaluation measures for programs serving exceptional children. Tests standardized on homogeneous groups may be inappropriate for special populations. If used, they may generate such problems as regression to the mean, which would have to be considered in the evaluation. Other difficulties arise from using achievement and aptitude tests to measure the typically higher-level objectives and the unique learning experiences of gifted or creative pupils as well as the specialized objectives of slow learners or mentally retarded children. Standardized tests often fail to yield valid measures of growth of these extremes. Consequently, it may be necessary to seek out special instruments or to rely on carefully constructed teacher-made tests in such cases.

The Time Dimension

The third dimension of this model is a key to the best utilization of the evaluator's time and to the optimal functioning of the overall evaluation system. Traditional models, including the above-mentioned behavioral objectives model, rely heavily on the classical pretest/post test design. A more effective model will incorporate both formative and summative evaluation -- i.e., pretest and post test data will be gathered and analyzed, but data collection will also occur at interim points during the program's operation. This helps to detect adverse situations or practices before the final collection of post test data. A particular program, for example, might require busing students from one school to another, and this might cause emotional problems in youngsters thus separated from familiar surroundings and deprived of after-school playtime. Questionnaires and/or interviews with students and parents early in the program's operation would yield feedback helpful in identifying the problem before collection and analysis of post test information. It goes without saying, nevertheless, that pretest and post test data are essential to the final or summative evaluation of any program.

Completion of the time dimension of the model will provide a year-long plan that will help the evaluator gather specified data at appropriate intervals. He should prepare a separate matrix for each month of the program's operation and indicate on it the kind of data to be gathered during that month (see Figure 2).

In filling out the cells on a given matrix, the evaluator should consider whether or not this prime interest group can supply appropriate information about this key feature at this time. For example, an evaluator of a work-study program who calls for executives of the employing firms to return a questionnaire every month is almost sure to find it difficult, if not impossible, to gather data from this source. In fact, such procedures may alienate a prime interest group to the point of endangering a program's success. Similarly, overtesting of students may produce a reaction that would make meaningful interpretation of test results impossible. And overall, it sometimes happens that negative feelings about evaluation are easily projected onto the program itself.

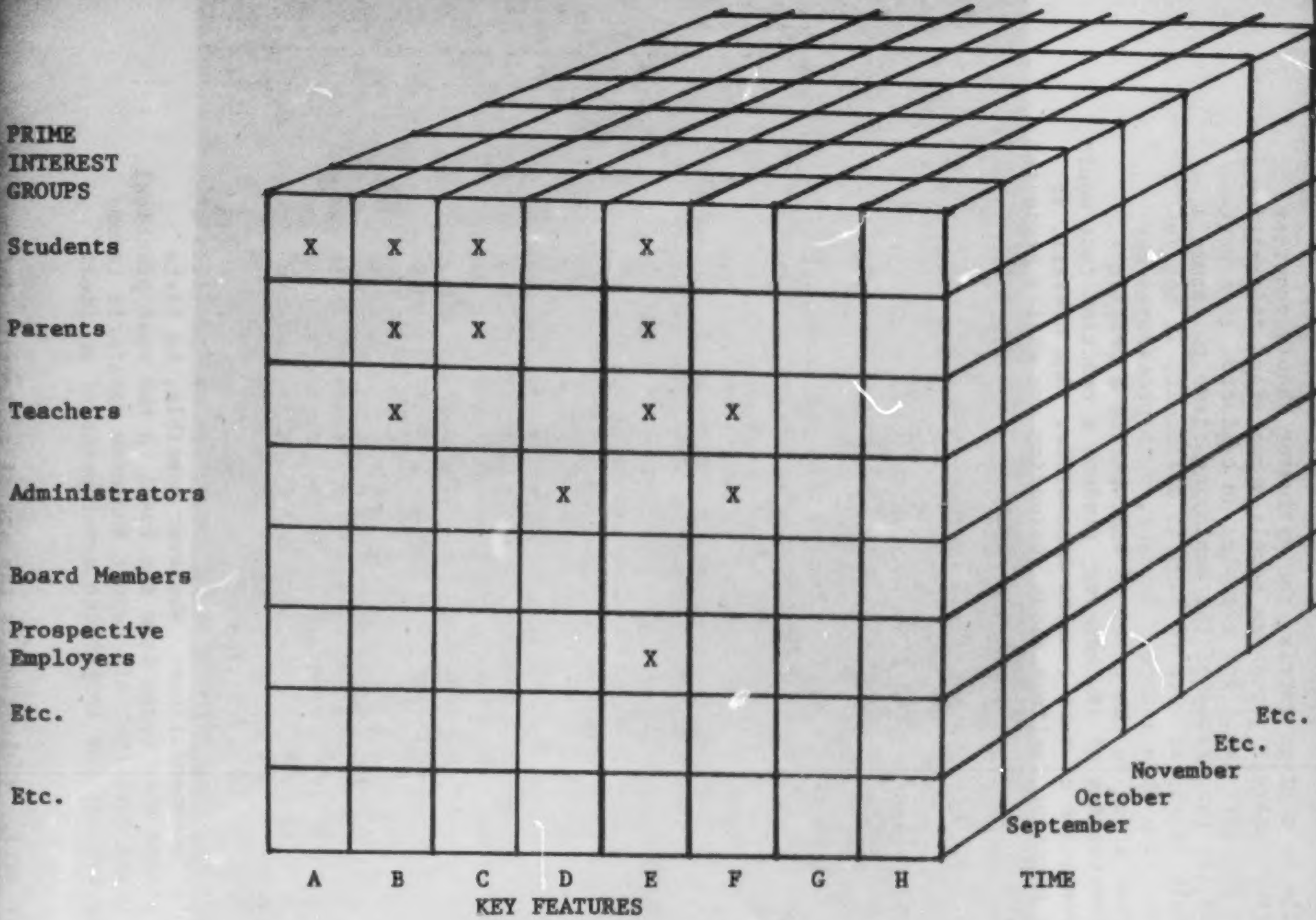
Analysis and Synthesizing Findings

After he has set up his evaluation model, the evaluator's responsibility centers on analyzing each set of data, on synthesizing the data about each key feature, and on providing administrators and staff with feedback. Appropriate methods of data analysis include descriptive and enumerative statistics (percentages, means, standard deviations, grade scores, etc.) as well as parametric and non-parametric statistical tests calling attention to significant differences between various sets of data. The evaluator should keep in mind the various levels of sophistication among the persons to whom he's reporting and present the data in ways everyone can understand. Whenever possible, statistical information should be given in tabular, graphic, and narrative forms, and every effort should be made to simplify the interpretation of complicated statistical findings.

A valuable but often neglected form of evaluative reporting is the presentation of oral or written comments from persons responding to interviews and questionnaires. Such comments should be analyzed for frequency and general trends, then summarized in the evaluation reports. Sometimes it's effective to include verbatim statements that typify the thoughts and feelings of particular groups.

The Key Features Model is designed to facilitate the processes of synthesizing evaluative data and disseminating information to be used in decision-making. The evaluator builds his reports, both formative and summative, around each key feature, and attempts to show how information from each prime interest group has led to a given conclusion and recommendation. He emphasizes points of agreement and disagreement among the groups and provides a rationale for each of his recommendations. Whenever possible, he lists alternative courses of action that range from the ideal to the most practical and easy. Finally, he makes sure that his report includes realistic recommendation as well as suggestions for long-range development of an ideal program.

If, then, as someone has said, "evaluation is the art of collecting information for the purpose of rational decision-making," we believe the Key Features Model gives the educator a simple but comprehensive instrument for the practical exercise of this art.

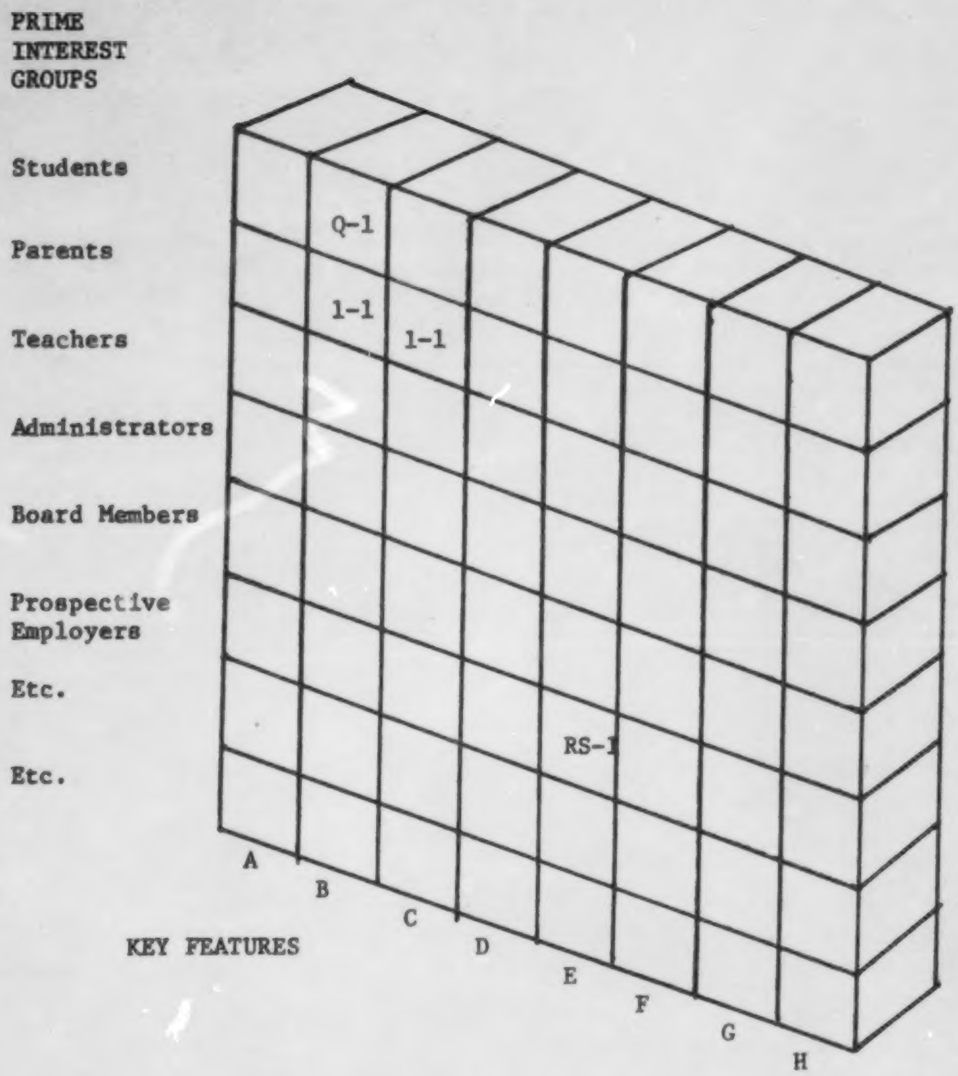

KEY FEATURES
TIME
September
October
November
Etc.
Etc.

PRIME INTEREST GROUPS	A	B	C	D	E	F	G	H
Students	X	X	X		X			
Parents		X	X		X			
Teachers		X			X	X		
Administrators				X		X		
Board Members								
Prospective Employers					X			
Etc.								
Etc.								

A - Achievement
B = Attitute Toward Program
C = Self-Concept
D = Cost per Pupil
E = Qualifications of Graduates
F = Inservice Training Needs
G = Etc.
H = Etc.

KEY FEATURES DIMENSION OF EVALUATION MODEL

FIGURE 1


PRIME INTEREST GROUPS
Students
Parents
Teachers
Administrators
Board Members
Prospective Employers
Etc.
Etc.
Q-1
1-1
1-1
RS-1
A
B
C
D
E
F
G
H
KEY FEATURES

A = Achievement
B = Attitute Toward Program
C = Self-Concept
D = Cost per Pupil
E = Qualifications of Graduates
F = Inservice Training Needs
G = Etc.
H = Etc.

ACH-1 = Achievement Pretest
Q-1 = First Questionnaire
RS-1 = First Rating Scale
1-1 = First Interview

TIME DIMENSION OF EVALUATION MODEL

FIGURE 2

The following represent techniques used to evaluate Gifted Programs according to key features - A Practical Model for Program Evaluation:

PROJECT GIFTED - WARWICK
1972-1973
Parent Questionnaire

Directions: Please do not sign your name to this questionnaire. No attempt will be made to identify persons completing these forms. Please return the questionnaire in the enclosed envelope within the next two or three days.

You can help to make Project Gifted a better program by giving careful thought to each of the questions that follow. Because of the relatively small number of persons involved in the project, each person's opinions will weigh heavily in analyzing the results. We appreciate your cooperation and assistance in helping us to evaluate Project Gifted.

		Yes	No
1.	Have you been provided with enough information about why your child was selected for Project Gifted?	____	____
2.	Have you been provided with enough information about the objectives of Project Gifted?	____	____
3.	Have you been provided with enough information about the activities and experiences that your child pursues in Project Gifted?	____	____
4.	Have you been invited to visit the Project Gifted classroom?	____	____
5.	Have you been offered sufficient opportunity to discuss your child's progress with the teacher?	____	____

6. Which of the following comments best expresses your child's general attitude about being in Project Gifted?

Enthusiastic ____
Positive ____
Indifferent ____
Negative ____

7. Has your child expressed pleasure or enjoyment about the work that he or she does in Project Gifted? (check one)

Often ____
Sometimes ____
Seldom ____
Never ____

8. Which of the following statements best expresses your child's attitude toward the degree of challenge of the work in Project Gifted?

Very challenging ____
Somewhat challenging ____
Not at all challenging ____
No answer ____

9. Has your child encountered any problems with his friends as a result of being involved in Project Gifted? If yes, please describe. ____ ____

10. Do you think that the name, "Project Gifted" calls unnecessary attention to the children participating in the program? ____ ____

11. Have you or your child encountered any problems as a result of being transported to another school? If yes, please describe. ____ ____

12. Has your child expressed a concern about missing work in the regular class or makingup assignments because he or she is out of the room to attend Project Gifted? ____ ____

13. Has your child's regular classroom teacher(s) expressed any displeasure because your child has missed work because he or she is attending Project Gifted? If yes, please describe. ____ ____

14. If your child is invited to participate in Project Gifted next year will you encourage him to do so? If no, please tell why. ____ ____

15. Can you identify any changes in your child's behavior or attitude toward school or education which seem to result from his or her participation in Project Gifted? If yes, please describe. ____ ____

16. Do you have any specific suggestions for changes in the operation of Project Gifted or the way it affects children or their parents? ____________

Number of years your child has been in Project Gifted ____________

PROJECT GIFTED

Student Questionnaire

DO NOT SIGN YOUR NAME.

Please answer by placing an X in the column that best expresses your opinion.

		YES	NO	UNDECIDED
1.	I enjoy coming to Project Gifted.	____	____	______
2.	The subjects we study in Project Gifted are interesting to me.	____	____	______
3.	I can learn more in small classes.	____	____	______
4.	The work we do in Project Gifted is too easy.	____	____	______
5.	I have time in Project Gifted to study things that are of interest to me.	____	____	______
6.	I like the way my teacher teaches this class.	____	____	______
7.	I get more individual attention in Project Gifted than I do in my regular class.	____	____	______
8.	The speakers who have visited our class are interesting.	____	____	______
9.	I enjoy being with the other students in my Project Gifted class.	____	____	______
10.	If you had a younger brother or sister in the third grade, and the school invited him or her to be in Project Gifted, would you advise him or her to be in the class?	____	____	______

11. What did you like best about Project Gifted?

11a. Why?

12. What did you like least about Project Gifted?

12a. Why?

13. Has Project Gifted helped you or hurt you in any way? (Check one.)

_____Helped
_____Hurt
_____Undecided

13a. Please explain your above answer.

14. If you could change Project Gifted in any way, what would you change about it?

WARWICK PUBLIC SCHOOLS
WARWICK, RHODE ISLAND

PROJECT GIFTED

Evaluation Scale for Visual Arts

Code No._____ Age _____ Boy/Girl_____ TOTAL SCORE_____

Evaluator_____________ Position_________________________ Date__________

		Low		Moderate		High	
	Elements	1	2	3	4	5	6
I.	Creative Expression, Imagination, Uniqueness						
II.	Flexibility, Appreciation and Adaptability to Various Media						
III.	Fluency Variety of Number of Ideas						
IV.	Sensitivity-Composition-Design						
V.	Manipulative Skills Construction-Weaving, etc.						
VI.	Growth						
	Column Total						
	Weight	1	2	3	4	5	6
	Weighted Column Total						

TOTAL SCORE _____

WARWICK PUBLIC SCHOOLS
WARWICK, RHODE ISLAND

PROJECT GIFTED

Evaluation Scale for Creative Writing

Code No._____ Age_____ Boy/Girl_____ TOTAL SCORE________

Evaluator____________ Position____________________ Date______________

	Elements	Low		Moderate		High	
		1	2	3	4	5	6
I.	Organization Unity, development, clarity						
II.	Mechanics Structure, grammer, usage Skills: spelling, punctuation						
III.	Originality Creative fluency, emotional quality, imagination, style, theme						
IV.	Unusual/Other Elements Dialogue: special format mood/setting, character development						
V.	Growth						
	Column Total						
	Weight	1	2	3	4	5	6
	Weighted Column Total						
	TOTAL SCORE						

RESOURCE DIRECTORY

- .LOCATING LOCAL COMMUNITY RESOURCES
- .GETTING A PROPOSAL FUNDED
- .RESOURCE AGENCIES AND ORGANIZATIONS
- .BIBLIOGRAPHIES

LOCATING COMMUNITY RESOURCES

Louise Evans

Every program for the gifted can make use of another hand, especially one that is talented and trained. The teacher of the gifted needs to spend time in searching out those people in the community who can help.

You may wish to use some sort of questionnaire to find persons who possess the skills for which you are looking. A ready group of interested people are the parents of the students you have. A questionnaire can be distributed to them very easily, although you may have to convince some of them that their knowledge and expertise is important to you. The questionnaire might be open-ended, asking questions as, "What are your hobbies and interests? Would you be willing to share these with the class?" or they might be specific: "Have you ever traveled to Greece? Do you speak Spanish? . . . use a computer in your work? . . . own a store? . . . collect stamps?"

Don't overlook the possibility of skills other teachers may have. You will develop better teacher relationships at the same time that you improve your program.

You will need to make contact with the various agencies and groups within your town whose interests seem to overlap with yours. Many businesses and governmental agencies are more than willing to work with students.

Two examples of forms for gathering information on human resources are included. The first is a detailed questionnaire used to discover hidden community resources. This is being field-tested at the present time. It is the Community Talent Miner developed by Reva Jenkins and Emily Stewart of the University of Connecticut - reprinted with permission. The second is a basic format which can be adapted for use in programs which include independent study or mentorships.

(This instrument is based on a model that emphasizes the use of community resource persons in programs for the gifted and talented. A complete description of the model can be found in The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented (Joseph S. Renzulli), Creative Learning Press, 530 Silas Deane Highway, Wethersfield, Connecticut, 06109. For information about obtaining multiple copies please contact the publisher at this address. Copyright 1977 by Creative Learning Press. All rights reserved.)

(working draft)

The Community Talent Minor
A Survey for Locating Community Resources

by
Reva C. W. Jenkins
Emily D. Stewart

University of Connecticut

Name______________________________ Date____________________

Address______________________________

Telephone______________________________

Place of Business______________________________

Instructions

In filling out this questionnaire, please keep in mind:

1. There are no predetermined responses. Be as original as you like in your replies.
2. Take as much space as you need to respond to any item. Use the back of the sheet if necessary.
3. If there are sections or questions you'd rather omit, simply skip them.

I. Trips, Safaris and Excursions

1. Have you traveled "off the beaten track" - to any unusual or out-of-the-way places?

2. Where did you go (include dates)?

3. What sorts of records do you have of your travels (for example: photographs, local products or other artifacts)?

II. Academic Experiences

1. If you attended college, business school, or had technical training, what subject was your major emphasis?

2. Did it have any unusual aspects (for example: an interdisciplinary major involvement in original research, publications or presentations)? Please list:

III. Intercultural Experience

1. Have you lived in another culture? If so, where?

2. For how long and under what circumstances did you live in the culture?

3. Describe one meaningful experience you had during your visit.

IV. Hobbies, Collections and Competitions

1. What are your hobbies?

2. Are you a collector? If so, what sorts of things do you collect?

3. How did you become involved with your hobby or collection?

4. Do you belong to an organized group of people with like interests (for example: Stamp Collectors of America, Flat Earth Society)? Please list:

5. Have you entered parts of your collection or hobby in a competition (include details and outcomes)?

6. Have you ever entered any other unusual competitions or contests (for example: a frog-jumping contest, limerick competition, model sailboat race)? What sort?

Is this something in which you participate on a regular basis?

V. Esoteric Topical Interests

Most of us know people who describe themselves as history buffs, ecology nuts, science fiction freaks, committed health food faddists or hopeless Sherlock Holmes addicts. Could you think of a special interest of yours for which you'd give yourself a similar label? Please include areas of interest and labels:

1. In what ways have you followed up on your interests?

2. Do you meet with other people who have similar interests (include group names, any "organized" activities, etc.)?

VI. Community-related Activities

(Directions: For each item, include group name(s) positions held, dates of involvement and how you became involved.)

Have you ever:

1. Lobbied for something:

2. Belonged to an interest group?

3. Campaigned for a cause or a person?

4. Been involved in a religious group?

5. Joined a community action group?

6. Donated time to a "charitable" organization?

VIII. Professional Experience

1. What do you do for a living?

2. How long has it been your career?

3. What other career(s) have you explored? How?

4. How did you select your current career?

5. Which unique or creative aspects of your profession would you like to communicate to a young person who might be interested in entering your field (for example: skills you have had to learn "the hard way")?

Of those areas explored in this questionnaire the following are ones about which I am especially enthusiastic:

I would be willing for the teacher(s) of ______________________ to contact me regarding possible applications of some of my interests and talents with program students.

____
(Your Signature)

(working draft)

(COVER LETTER TO ACCOMPANY THE COMMUNITY TALENT MINER)

To Interested Parents and Community Members:

An important aspect of programs that deal with intellectually gifted or artistically talented students is providing these young people with challenging experiences and stimulating personal interactions. Because of the unusual potential of gifted and talented students, working with them is not only an important job for our schools, it is at times a complex one. A wide variety of assistance is needed, and this year we hope to draw more effectively on some of the resources in our own community. We would like to provide for these young people more opportunities for community involvement, a wide exposure to people and ideas, and a chance for some in-depth explorations.

You may have been involved in various school programs already. However, we are seeking a different kine of involvement than squiring children on field trips, supervising bake sales or helping with classroom parties. We hope to tap some of your "undiscovered" talents and abilities not usually drawn upon by our schools. You might not be aware of the impact that some of your experiences, interests, skills, or talents might have on the life of a gifted or talented young person.

The questions that follow ask you to reflect on some of the creative or unusual aspects of your hobbies, professional activities, experiences and even your college major. We hope that you will be able to share some of these with groups of students. We would especially like to identify some persons who would be willing to work with one or two students over a period of time exploring a common interest. This could be a chance for you to deal more intensively with a topic that intrigues you and to help a student learn some valuable "real world" skills to which he might not be exposed in the regular school curriculum.

Filling out the survey does not, of course, indicate that you are making a firm commitment ot be involved with our program. After reviewing your responses, we will probably follow through with a further contact. The survey will give us some helpful information about you and your talents - and might give you some surprising insights into the potential value of your experiences and interests.

PEOPLE FOR THE RESOURCE PROGRAM

Dear Parents:

People who have specialties - talents, skills, hobbies, or interesting experiences - can do much to enrich the Resource Program. At times, volunteers are needed to share their knowledge and abilities with a whole class or to help an individual student to explore a special interest area in depth.

Please indicate below that specialties you would be willing to share with students in the Resource Program (grades K-6). Check all applicable items, adding other specialties if they are not listed. Use (H) or (W) to denote husband's or wife's specialties.

Indicate in a few words the specific nature of your specialty (e.g., "Can demonstrate and teach interpretive dance . . . can show slides and discuss modern art . . . can demonstrate baking of bread . . . can give talk on principles of architecture, building codes, patent law, local history, medical aspects of smoking, gum disease, etc."). Also indicate the grade level(s) for which you think your specialty is best suited. Thank you for your help.

___Acting and Dramatics____

___Architecture____

___Art____

___Banking and Economics_______________________________________

___Business Operations
(Salesmanship,
Advertising, etc.)____

___Construction and related
trades____

___Cooking, Baking,

Nutrition____

___Dancing____

___Foreign Language
and Culture____

___Gardening____

___Government____

___History, Geography,
Travel____

___Hobbies and crafts
(Woodworking,
Collecting, Inventing,
Hunting, Jewelry-making, etc.)____________________

___Law____________________

___Mathematics____________________

___Medicine and allied
health fields____________________

___Photography____________________

___Science____________________

___Writing, Publishing____________________

___Other,
please specify____________________

____

YOUR NAME____________________OCCUPATION____________________PHONE__________

Please indicate on the following chart when you can assist students in the Resource Program in learning new things.

	HUSBAND		WIFE	
DAY	Any time on these days	Only between these times	Any time on these days	Only between these times
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				

Volunteers are often needed in accompanying classes on field trips. Are you available at times? YES___ NO___

If you know of other persons in the community (not parents or students in the Resource Program) who would be willing to share their specialties, please indicate their names - and addresses, if known - below:

____

____

____

GETTING A PROPOSAL FUNDED

David A. Kamchi

(Excerpted from guidelines prepared for the New York State Education Department Conference on Educating the Gifted and Talented (January 14, 1977) by David A. Kamchi, Guidance Counselor (I.S. 155 District 7 Bronx), member of the New York State Education Department Team participating in the 1974 National/State Leadership Training Institute on the Education of the Gifted and Talented.)

SOURCES OF FUNDING

There are at least three excellent sources of funding to suppor or initiate programs to educate the gifted and/or talented pupil population. These sources of funding are ESEA IVB, ESEA IVC Mini-Grant, and ESAA (Emergency School Assistance Act).

PROPOSAL DEVELOPMENT PROCESS

The proposal development process for each of the above listed sources of funding, especially for ESAA, requires time and effort if one hopes to support or initiate programs for the gifted and/or talented pupil population. ESEA IVB, ESEA IVC Mini-Grant, and ESAA proposal submission due-dates will most likely be in January. Starting to develop and write proposals, especially for ESAA, during the September to November period will not produce the best results. A meaningful proposal development effort for the January submission due-dates should start nearly a year in advance. I strongly suggest the following ten or eleven-month proposal development schedule:

Phase 1: (for the period of February to August)

1. Organize a broad-based school-community committee or task force consisting of public school staff, non-public school staff, public school parents, non-public school parents, representatives of organizations concerned with education, etc. All members of this group should be completely supportive of the need to further assist our very able pupils. The group should meet at least once a month to analyze needs, set goals, identify possible ways to meet local needs, etc. For a variety of reasons, it is very important that each meeting of this group be documented.

2. Obtain and review a copy of the guidelines and application forms for each of the funding sources identified above.

3. Request and obtain technical assistance from program officers connected with each of the funding sources.

4. Request and obtain technical assistance from program officers connected with the State Education Department curriculum areas of particular interest to the planning group.

5. Research the topic.

6. After making an appropriate and authorized request, visit the offices of the U. S. Office of Education unit in charge of ESAA. The primary purpose of this visit is to read several of the proposals previously approved for funding (especially if there are

Phase 2: (for the period of September to November)

1. Develop a preliminary draft of a proposal to be reviewed by appropriate program staff officers.

2. Write and process a final and complete proposal for appropriate submission.

GETTING MONEY FOR YOUR PROGRAM

Obtaining funding for a program for gifted/talented takes a great deal of careful planning in writing the proposal. The first step is to know which Federal Bureau is in charge of funding the type of program you are contemplating. It is best to phone the bureau since the secretary receiving your call will address the envelope as you give the information. The Office of Gifted and Talented (which may be incorporated into a new Bureau of Education of Exceptional Persons) is located in the Donohue Building, Sixth and D Streets, N. W., Washington, DC 20202. They can be reached by phone: area code 202, 245-2481, 2482, or 2483. They will send guidelines concerning funding. The Federal objective for the years 1973-78 is to double the number of gifted and talented students served. The bottom line of any proposal for funding is increased service to children and youth.

Last year 870 applications were received from local educational agencies. 163 were finalists in that they were sent to readers who are experts in the education of gifted/talented children and youth. Fourteen were funded immediately and four were added. This year project will probably range from $12,000 to $20,000.

GIFTED/TALENTED EDUCATION

Three factors in selection included support from someone at the state level with full-time responsibility for fostering programs for the gifted and talented, some sort of funding other than Federal being available, and some aspect of teacher training (dissemination beyond the local program appears to be essential). One of the readers, who invariably reads from the budget back to the narrative description of the program, indicates that he looks for a "new twist" or new approach to serving the gifted and talented.

He suggests that you learn the name of the Program Manager and everyone who knows the Program Manager for the particular funding you are seeking. You should be on the mailing list of RFP (Request for Proposals) and keep track of information published in the Federal Register (especially Vol. 41, #89, May 6, 1976). Your proposal MUST be in the office in Washington before 3:59 p.m. of the closing date it is automatically rejected. Be sure to check the closing date before submitting your proposal. Another critical factor is following the guidelines exactly -- or your proposal is again rejected without being seriously considered. It is important to know the amount of money that can be requested, who is eligible to apply, where the applications are to be sent, and how many copies need to be sent. And remember the deadline applies to receiving your application, NOT WHEN YOU MAILED IT.

General criteria call for a needs assessment (why are you asking to have funding?), objectives (what you plan to do with the money), activities (how you plan to achieve your objectives -- very crucial to the readers who pass judgement on your proposal), evaluation (how will you determine whether you have achieved your objectives and improve the continued service to gifted/talented students), management (human and physical resources on a cost effectiveness basis). Since all children in a community must be served, you will need to work with and secure the endorsement of non-public schools. Articulation with general education and cost effectiveness are key factors in the decision to fund your project so be sure to show how each item in the budget helps to implement the purpose of your program. Dissemination increases the likelihood of replication by others -- another key factor in deciding to fund your project.

THE MAJOR COMPONENTS OF A PROPOSAL

Topic	Functions in Terms of General Questions Answered
1. Introduction	
Statement of the Problem	What needs to be done and why.
Review of Literature	What has been done that is relevant.
Objectives	What are the specific testable goals.
2. Procedures	
Design	What is the structural plan. What control will it afford.
Sampling	What population will be sampled. What size sample and how drawn.
Measurement and Data	What will be measured. How.
Analysis and Evaluation	How will data results be analyzed and evaluated.
Time Schedule	How much time will be needed to complete each portion of study.
3. Product and Use	What will be the end-product of the study. What contribution could it make. How.
4. Personnel and Faciltiies	Who will do the study. What is their relevant competence.
5. Budget	What will each part of the study cost.

RESOURCE AGENCIES AND ORGANIZATIONS

The primary resource agency in Connecticut is the State Department of Education's Office for Gifted and Talented. Contact: William G. Vassar, Consultant for Gifted and Talented, Connecticut State Department of Education, Box 2219, Hartford, Connecticut 06115, Telephone 566-3444.

William Vassar is the state's full-time resource person for districts who are planning programs, seeking prior-approved-for state-reimbursable programs, and implementing programs in their districts. In addition to technical assistance, he regularly presents numerous in-service workshops and statewide conferences.

The following agencies and organizations can also be contacted for information and assistance:

Office for Gifted and Talented
United States Office of Education
P. O. Box 3, Room 2100
Seventh and D Streets, S. W.
Washington, DC 20200

(This office develops and supports educational programs for gifted and talented and makes funds available for state and local programs, Dorothy Sisk, Director.)

The Association for the Gifted
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

(TAG is a national organization supporting educational programs for the gifted and is a division of CEC. Members must join both TAG and CED to receive periodical publications: Exceptional Children and Talents and Gifts, as well as bonus books on the gifted.)

National Association for Gifted Children
Route #5
P. O. Box 630A
Hot Springs, Arkansas 71901

(NAGC is a national organization concerned with the development of gifted children at home and in school. Membership includes a subscription to Gifted Child Quarterly.)

National/State Leadership Training Institute on Gifted and Talented
316 West Second Street, Suite PH-C
Los Angeles, California 90012

(The N/S-LTI-G/T was established by the Office of Gifted and Talented to work with states and local school districts to upgrade supervisory personnel and program planning. They publish a number of guidebooks as well as the monthly Bulletin.)

ERIC Clearinghouse on Handicapped
and Gifted
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

(The ERIC system is a national program for dissemination of information about experimental research and development. Specialized bibliographics and other publications on the gifted and talented are available.)

Special Education Resource Center
275 Windsor Street
Hartford, Connecticut 06120

(SERC is a division of the Connecticut State Department of Education, offers special study institutes as well as reference services in their extensive library on special education.)

OTHER RESOURCE AGENCIES

Institute for Behavioral Research
in Creativity
1417 South Eleventh Street, East
Salt Lake City, Utah 84105

National Merit Scholarship Corp.
99 Grove Street
Evanston, Illinois 60201

Mensa and Teen Mensa
50 East 42 Street
New York, New York 10017

National Honor Society
1904 Association Drive
Reston, Virginia 22091

Creative Education Foundation,
Inc.
State University College at
Buffalo
Chase Hall
1300 Elmwood Avenue
Buffalo, New York 14222

Explorer's Club
46 East 70 Street
New York, New York 10021

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.CURRICULUM
.PROGRAM DEVELOPMENT
.AFFECTIVE NEEDS
.BOOKS FOR PARENTS
.EVALUATION

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SELECTED ABSTRACTS DEALING WITH IDENTIFICATION OF GIFTED AND TALENTED (ERIC)

ABSTRACT 10378

EC 01 0378 ED 019 770
Publ. Date 67 72p.
Martinson, Ruth A. & Seagoe, May V.
The Abilities of Young Children
CEC Research Monograph Series
Council for Exceptional Children,
Washington, D. C. EDRS mf.

In order to assess the quality of creative products in art, music, writing, social studies, and science, children attending grades three to six of the University Elementary School of the University of California, Los Angeles, were divided into two groups on the basis of intelligence. The higher group (49 pupils, IQ of 130 or more) and the low group (57 pupils, IQ of 120 or less) were similar in educational backgrounds, external environment, parental level of education, and sex ratio. Three independent judgments of each child's product in each subject were made by experts in the particular field represented. Criteria for creativity included originality and effectiveness of expression. In five out of the eight products evaluated, a significant relationship (p equals .05) was found between high IQ and high quality of judged product. Findings thus supported the hypothesis that giftedness and creativity are not antithetical. Both groups were also given Guilford and Hoepfner's test for divergent thinking. The only test which significantly separated the high from the low groups was the Association Test (t test, p equals .05). Since no significant differences were found between high and low IQ groups on the four remaining tests, a negligible relationship between intelligence and divergent thinking was indicated. Examples of the children's products in all areas and an 18-item reference list are included. The appendix contains biographical sketches of the judges. This document is available from The Council for Exceptional Children, NEA, 1201 Sixteenth Street, N. W., Washington, D. C. 20036, for $2.00. (JP)

ABSTRACT 12003

EC 01 2003 ED 030 989
Publ. Date June 62 36p.
Early Identification of the Gifted
Through Interage Grouping. Plainedge
Public Schools, New York. New York
State Education Department, Albany.
EDRS mf. hc.

To determine the advantages of interage grouping, 18 first graders (mean IQ 118.65) were assigned to two interage classes containing first, second, and third graders; 19 first graders (mean IQ 119.60) were assigned to two straight first grade classes. All children selected had been recommended by their kindergarten teachers as their brightest students. Both groups were given the Metropolitan Achievement Test, Primary I Battery in the fall and Primary II Battery in the spring. Students in the interage condition performed at a higher level on all achievement scales; group means were significant on word discrimination and arithmetic (p less than .01). Students selected as evidencing initial adjustment problems showed greater gains than their controls on all four scales. However, they achieved significantly lower scores on the California Test of Personality. The parents of children in both conditions responded favorably to questions concerning their children's reactions to school, their adjustment in and out of school, and their interest in reading. The parents of children in the interage program provided significantly higher ratings on the richness and variety of classroom experiences and the motivations provided to challenge the child to make use of his talents.

ABSTRACT 20070

EC 02 0070 ED N.A.
Publ. Date Feb 67 10p.
Ringness, Thomas A.
Identification Patterns, Motivation, and School Achievement of Bright Junior High School Boys. EDRS not available. Journal of Educational Psychology: V58 N2 P93-102 Feb 1967

Interview and card sort data were obtained on 261 high-, average-, and low-achieving bright 8th grade boys in an attempt to confirm or refute earlier findings concerning identification patterns, motivation, and values. Confirmation was generally found, the main exception being that in the present study most subjects identified with fathers whereas in the previous study high achievers were most likely to do so. Socioeconomic status bias may have influenced earlier data. Low achievers were found more motivated academically. Low achievers were more nonconforming, whereas high achievers were more independent. School was seen by most subjects as demanding conformity, and subjects accepted this role model. Scholarship was shown to have little relationship to peer popularity, and the perceived norm for school achievement was that of mediocrity. (Author)

ABSTRACT 31496

EC 03 1496 ED N.A.
Publ. Date 70 6p.
Keogh, Barbara K. & Smith, Carol E.
Early Identification of Educationally High Potential and High Risk Children. EDRS not available. Journal of School Psychology: V8 N4 P285-90 Win 1970

Early identification of educationally high potential and high risk children was investigated by following 49 children from kindergarten entrance through grades five of a regular school program. Kindergarten predictive measures were the Bender Gestalt and teacher's evaluations. Follow-up measures were yearly standard achievement test results. Analyses revealed consistently high and significant relationships between teachers' ratings and subsequent school achievement. Teachers were surprisingly accurate in early identification of both high risk and high potential children. The Bender was more accurate for identification of high potential than high risk children. Findings support the use of these measures for initial screening of children entering formal school programs. Specification of dimensions of teachers' evaluations may provide clues to understanding the complexities of school readiness. (Author)

ABSTRACT 32629

EC 03 2639 ED N.A.
Publ. Date 69 14p.
Saunders, Robert J.
Identifying the Artistically Gifted in the Classroom. Connecticut State Department of Education, Hartford, Bureau of Elementary and Secondary Education. EDRS not available.
Connecticut State Department of Education, 165 Capitol Avenue, Hartford, Connecticut 06106. Prepared for the Creativity: Its Educational Implications Workshop (North Haven, Connecticut, December 3, 1969).

Copied with permission of CEC Information Center on Exceptional Children to familiarize the general classroom and art teacher with essential art education literature dealing with the creative student in art, a brief review of research studies on this topic made in art education as a discipline (as opposed to theoretical and philosophical statements on the nature of the creative process) is presented. The meanings of the terms talented, gifted, and creative in art are discussed and criteria for creativity enumerated. Suggestions are made as to how artistically gifted students can be identified within the limitations of the average art lesson or art activity at the elementary and secondary levels. (KW)

BIBLIOGRAPHY ON CURRICULUM

ABSTRACTS OF SELECTED MATERIALS ON CURRICULUM FOR THE GIFTED AND TALENTED

Available from the CEC Information Center on Exceptional Children

The CEC information Center was established at the Council for Exceptional Children to serve as a comprehensive source of information on research, instructional materials, programs, administration, teacher education, methods, curriculum, etc., for the field of special education. The center functions as the Clearinghouse on Exceptional Children in the Educational Resources Information Center's (ERIC) program and also as a member center in the Special Education IMC/RMC Network.

How to Purchase Documents

Documents with an ED number and EDRS availability indicated may be purchased from the ERIC Document Reproduction Service (EDRS), P. O. Drawer 0, Bethesda, Maryland 20014.

ABSTRACT 10301

EC 01 0301 ED 017 107
Publ. Date 66 89p.
Experiments in Musical Creativity. A Report of Pilot Projects Sponsored by the Contemporary Music Project in Baltimore, San Diego, and Farmingdale.
Music Educators National Conference, Washington, D. C.
EDRS mf

Three pilot projects were conducted in Baltimore, Maryland, San Diego, California, and Farmingdale, New York, with elementary and junior high school students. The projects in Baltimore and San Diego provided inservice seminars for music teachers along with pilot classes in different types of schools. Objectives of these two projects were presentation of contemporary music to children through suitable approaches. Experimentation with creative music experiences for children, identification of contemporary music appropriate at several grade levels, provision through contemporary music of new means of creative experiencing, and inservice education of teachers. The pilot project in Farmingdale was designed to demonstrate two types of creative teaching, experimental techniques in music composition using 20th century idioms and the development of musical resources through rhythmics, singing improvisation and composition. The interest and motivation which resulted on the part of teachers and pupils were viewed as supporting the premise that children are receptive to contemporary music and are capable of employing contemporary techniques in creative activities. Recordings of some of the contemporary music used in the projects are listed. This document was published by the Music Educators National Conference, 1201 16th Street, N. W., Washington, D. C. 20036. (CB)

ABSTRACT 10665

EC 01 0665 ED N.A.
Publ. Date 61 414p.
Fliegler, Louis A., Ed.
Curriculum Planning for the Gifted
EDRS not available
Prentice-Hall, Inc., Englewood
Cliffs, New Jersey

Designed for teachers, administrators, and curriculum specialists, the book is a resource compendium or a basic text on curriculum development for the gifted. Basic problems, principles of curriculum construction, program development, and administrative provision are discussed. Content, skill development, pupil identification, and enrichment activities are included for each of these subject areas: social studies, arithmetic, creative mathematics, elementary and secondary science, creative writing, reading, foreign languages, creative art, music, and dramatics. Curriculum implementation is also considered. (IM)

ABSTRACT 10919

EC 01 0919 ED 026 762
Publ. Date 65 534p.
Barbe, Walter B.
Psychology and Education of the Gifted: Selected Readings
EDRS not available
Appleton-Century Crofts, 440 Park
Avenue South, New York, New York
10016 ($4.50)

An overview of educational and psychological literature concerning the gifted is presented in 55 papers with editorial comments. The historical development of the study of the gifted and cultural attitudes are first considered. Discussions of the effectiveness of various screening methods for identifying the gifted include evaluation of creative, social, and other nonintellectual factors: suggestions are given for providing an optimal environment. Theories are discussed about hereditary and environmental influences on mental ability with ideas for conserving and increasing our supply of superior mental talent. Writings on the characteristics of eminent scientists, unstable geniuses, superior college students, and younger gifted children are included in a consieration of the gifted individual's intellectual, social, and emotional characteristics. Special programs to help develop and encourage giftedness, such as acceleration, enrichment, and homogeneous grouping are described and evaluated; current issues and needed research are considered; and teacher qualities judged effective in aiding creative growth are discussed. (RM)

ABSTRACT 11048

EC 01 1048 ED N.A.
Publ. Date Sep 68 88p.
Pilch, Mary M.

Abstract 11048 (Continued)
Special Education for the Gifted Through Television; Syllabus 1968-69, A Compendium of Information About a Special Educational Television Program Organized and Developed for Challenging the Productive-Divergent Thinking Potential of Gifted Students in Grades 5-6-7
Educational Research and Development
Council of Northeast Minnesota,
Duluth Office of Education (DHEW),
Washington, D. C.
EDRS not available
OEG-3-7-7-03260-4955
P-OE-67-03260-1

A series about man and his future developed for gifted students in grades 5, 6 and 7 are described; the differences between the three related areas, content, process, and inservice are mentioned and the dates, times, titles and instructors of programs are given. A model for teaching productive-divergent thinking developed by Frank E. Williams lists 23 teaching strategies which are discussed. Synopsis of the 54 half-hour programs comprising the series (18 programs in each of the three areas) are provided. Content and process areas designed for students are organized according to theme, film data, film concepts, vocabulary, provocative questions, concepts emphasized, and strategies demonstrated while an interpretation and discussion of strategies is given for the inservice shows. Programs cover the following topics: the need for space to control population explosion and to implement new communication systems - the need for exploration of outer space and transportation problems, health needs - the problem of adequate education for a complex society and the search for beauty. (RP)

ABSTRACT 11367

EC 01 1367 ED N.A.
Publ. Date 66 330p.
Gallagher, James J.
Teaching the Gifted Child
EDRS not available
Allyn and Bacon, Inc., 150 Tremont
Street, Boston, Massachusetts
02111 ($7.95)

Addressed to the teacher, the text defines gifted children and their characteristics. Low producing gifted children are discussed, as are means of programming for them. Also treated are changing school programs, administrative changes, and personnel. Creativity is described and discovery and inquiry are examined as tools for teaching. Arithmetic, science, and social studies curricula and programs are surveyed. (JD)

ABSTRACT 11877

EC 01 1877 ED 028 546
Publ. Date 68 38p.
Keaster, Charles W.
The Mentally Gifted Minor Program; Report of a Study Made by the Division of Special Schools and Services
California State Department of Education, Sacramento, Division of Special Schools and Services
EDRS mf, hc

A description of programs for mentally gifted students covers types of programs, current status of the California program, and state apportionments for excess costs. Program characteristics listed are the objectives of three school districts, information program on program costs, school district participation, and district participation in a special study. Findings and recommendations are discussed in terms of school district Form J22 MG reports, criteria for determining excess expense, expenses and subsidiary accounts, pupil identification, judgment and test scores as criteria for placement, identification cost reimbursements, individual counseling with pupils and parents, special consultant services, special instructional materials, equipment items, special instructional services, teacher salaries, operating costs, and considerations of current funding, incidence in districts, and summer school programs. Six tables present data. (RP)

ABSTRACT 20002

EC 02 0002 ED 020 590
Publ. Date 66 144p.
Gallagher, James J. and Others
Educational Problems and Planning for Gifted Students -- Selected Papers from Graduate Leadership Training Program on the Gifted
Illinois University, Urbana, Institute for Research on Exceptional Children: Illinois Department of Program Planning for the Gifted, Urbana
EDRS mf, hc

Seven articles from the Institute for Research on Exceptional Children consider the gifted child. The first article, Leadership Training for the Gifted -- A Graduate Program, is by J. J. Gallagher, director of the program. Six research and development papers by graduate students follow: The Variables of Race, Sex and Intelligence Related to Social Choices of Disadvantaged, Gifted Children by V. Godman; Honors Program Students-Their Academic Attainments, Personality Traits and Self-Concepts by W. D. Simmons; An Analysis of the Verbal Definitions of Elementary School Children-A Pilot Study by M. Weiser; Evaluation of a Summer Workshop on Gifted Children by

F. Shaffer; Developing a Social Studies Curriculum for Teaching Values in the Elementary School by M. Schevers; and The Development of a Program of Sentential Logic for Gifted Students by K. A. Retzer. The student papers all provide figures, tables, and reference lists. (JD)

ABSTRACT 20031

EC 02 0031 ED 027 652
Publ. Date 65 353p.
Torrance, E. Paul
Rewarding Creative Behavior; Experiments in Classroom Creativity
Minnesota University, Minneapolis,
College of Education
Office of Education (DHEW, Washington, D. C., Cooperative Research
Branch
EDRS not available
CRP-725
Prentice-Hall, Inc., Englewood
Cliffs, New Jersey 07632 ($7.95)

The need for rewarding creative thinking is asserted; a plan is proposed for studying evaluation and creative behavior, and measurement of creative behavior is discussed. Three groups of studies are presented. The first set considers the ways the intermediate environment rewards creative behavior: aspects treated include applying principles for rewarding creative thinking; creative and critical evaluative attitudes of teachers; creative activities as rewards for creative thinking; and differential rewards for boys and girls. The second set investigates the following issues about the evaluative behavior of the classroom teacher: competition as external evaluation; unevaluated practice and creative behavior; critical and creative peer-evaluated practice; evaluative discussions about creative productions; peer pressures in homogeneous and heterogeneous groups; positive, negative, and trouble-shooting evaluation; and cultural difference in evaluating creative characteristics. The final study concerns helping children value their ideas. Practical applications of the studies are presented; appendixes are provided on the instruments used in the described studies and on developing creative thinking through language arts. (JD)

ABSTRACT 20614

EC 02 0614 ED N.A.
Publ. Date 65 472p.
Gold, Milton J.
Education of the Intellectually
Gifted - Charles E. Merrill
International Education Series
EDRS not available
Charles E. Merrill Books, Inc.,
1300 Alum Creek Drive, Columbus,
Ohio 43216

Diverse research materials were used to support concepts in the identification and nurturing of gifted children in schools. Giftedness is viewed in terms of heredity and environment with added attention to characteristics, creativity and the capacities for testing and identifying these ascribed attributes. Focus is then turned to program planning, program patterns, and the teaching of thinking, language arts, social studies, science, mathematics and fine arts for exceptionally intelligent students from elementary through secondary level. Special emphasis is given to the types and duties of personnel, especially those in guidance, who are needed for the maximum development of gifted students. Problems that could occur in dealing with achieving and underachieving gifted pupils, such as ability grouping, acceleration, and motivation, are extensively discussed. A reference list cites 468 items. (JP)

ABSTRACT 21746

EC 02 1746 ED 035 125
Publ. Date 68 85p.
Vassar, William G. (Ed.): Renzulli,
Joseph S. (Ed.)
The Gifted Child in Connecticut:
Practical Suggestions for Program
Development
Connecticut State Department of
Education, Hartford, Bureau of
Pupil Personnel and Special
Educational Services
EDRS mf, hc

Materials are presented to assist local school personnel in the adoption of successful programs and services for gifted and talented pupils. Articles offering solutions to problems in, or suggesting ideas and guidelines for, educational programming include the broadening concepts of giftedness by E. Paul Torrance; justification for special programs, both by Virgil S. Ward; homogenous grouping by Walter B. Barbe; a plan for identification by John C. Gowan; acceleration by Mary M. Pilch; and seven essentials of programs by Joseph S. Ranzulli. Other articles furnish lists of questions for staff evaluation of the tifted problem, outline the role of local administrators and of the state department of education, suggest criteria by which to guide programs, and list some of the current practices being followed in programming in the nation's secondary schools. How the teacher can further creativity is the subject of material adapted from E. Paul Torrance and from John C. Gowan and George D. Demos. Several systems and special projects in Connecticut and Massachusetts are recommended for visitation, and guidelines for Connecticut administrators, based upon legislative enactments, are suggested. (WG)

ABSTRACT 22104

EC 02 2104 ED 035 524
Publ. Date 69 93p.
Reading for the Gifted: Guided
Extension of Reading Skills
Through Literature. Part V.
Los Angeles City Schools, California, Division of Instructional
Planning and Services
EDRS mf, hc

Guidance is provided in this instructional bulletin for study by gifted pupils of a series of books related to the central theme - The Development of Strong Moral Character Through Overcoming Adversity. The books selected provide opportunities for the examination of moral and spiritual values. The instructional materials developed and books selected were done so specifically for use by gifted pupils at grades 3 and 4. Literary terms are defined, synopses of the selected books and instructional information for many are included, plus biographical information about most of the authors. References are given. (NH/Author)

ABSTRACT 30729

EC 03 0279 ED N.A.
Publ. Date Mar 70 4p.
Horn, Lister W.: Gleason, Gary M.
Teaching a Unit on the Computer to
Academically Talented Elementary
School Children
EDRS not available
Arithmetic Teacher: V17 N3
P216-9 Mar 1970

Concepts of the computer were taught to academically talented fifth and sixth grade students in 10 sessions of one and a half hours each. Included in the unit were computer history, numeration systems, computer hardware, and FORTRAN programming. Students wrote programs independently, showed interest, and gained understanding of the language of programming. Suggestions for improved units are discussed. (MS)

ABSTRACT 32485

EC 03 2485 ED N.A.
Publ. Date 70 272p.
Hildreth, Gertrude Howell
Educating Gifted Children at Hunter
College Elementary School
EDRS not available
Greenwood Press, Inc., 51 Riverside
Avenue, Westport, Connecticut 06880

Examined are the role and the achievements of Hunter College Elementary School in New York City in educating gifted children. Distinctive features characterizing the program of the school are described. Data cited refer to the school's first 10 years (1941-1951). The discussion covers administrative organization, goals and curriculum, class organization, teaching methods, instructional resources, and specific instruction in subject matter and academic skills. Also covered are school life and school-community and school-parent relationships. The guidance and adjustments of gifted children are appraised, and the role of the school in the preparation of teachers of the gifted outlined. Evaluative evidence relating to the academic achievement, skills, and attitudes of students is cited to establish the validity of the school's program. (KW)

ABSTRACT 40452

EC 04 0452 ED N.A.
Publ. Date 71 9p.
Torrance, E. Paul
Identity: The Gifted Child's Major Problem
ERS not available
Gifted Child Quarterly: V15 N3
P147-55 Fall 1971
Paper Prepared for the 18th Annual
Meeting of the National Association
for Gifted Children, Chicago,
Illinois, May 6, 1971

Descriptors: exceptional child research, gifted, creative ability, behavior patterns; case studies; self actualization; creativity research.

Three response patterns of conformity, rebellion, and creative individuality that were found to characterize gifted children's resolve of the search for their identity were illustrated by brief case studies of six gifted young people. The gifted young persons were viewed first, during the seventh to 12th grade period and second, during the the ages of 25 and 30. It was found that gifted children needed freedom to wander, to experiment, to risk, and to discover their individual limits, which ultimately enabled them to find their identity. Lives of the six young people described were said to reveal the duality of the unique and universal. Each was said to seek his unique identity and yet, seeking identity was characterized as a universal phenomenon. The author concluded by advocating that gifted children receive supporting adult guidance in the quests for their identity. (CB)

ABSTRACT 42229

EC 04 2229 ED 063 717
Publ. Date 71 13p.
Project Gifted
Cranston School Department, Rhode
Island, Bureau of Elementary and
Secondary Education (DHEW/OE),
Washington, D. C.
EDRS mf, hc

Descriptors: exceptional child education; gifted; intermediate grades; educational programs; student placement; program descriptions.

Covered in the short discussion of Project Gifted for intermediate grade children are program description, instructional strategy, classification of question categories to cue various levels of thinking, traits common to intellectually gifted students, and procedure for selection of students participating in project Gifted. Project Gifted is described to foster a learning environment that enables a child to become a critical thinker. The instructional strategy is said to employ Bloom's Taxonomy of Educational Objectives as a frame of reference. The classification of question categories includes knowledge, comprehension, application, analysis, synthesis, and evaluation. Then follow brief statements about 17 traits common to intellectually gifted students. The procedure for selection of students i described to involve language, arts, mathematics, and reading results on an achievement test battery, verbal test scores, administration of the Stanford Binet Individual Intelligence Test and the Wide Range Achievement Test, results of a teacher behavior rating scale, a selection committee, and informing appropriate parents that their children have been selected for the program. (For related studies, see also EC 042 227-8 and EC 042 230). (CB)

ABSTRACT 42917

EC 04 2917 ED N.A.
Publ. Date Sep 72 5p.
Keating, Daniel P.: Stanley, Julian C.
Extreme Measures for the Exceptionally Gifted in Mathematics and Science
EDRS not available
Educational Researcher VI N9
P3-7 Sep 1972

Descriptors: exceptional child research; gifted; junior high school students; educational needs; mathematics; science; educational opportunities; advanced placement; cost studies; undergraduate study.

Reported was a research project on the educational needs of children exceptionally gifted in mathematics and science. A contest was organized to discover outstanding seventh, eighth and 13 year old ninth graders in which 396 students took the College Board's Standard Achievement Test - Mathematics and its Math Level 1 achievement test, and 192 students took the Sequential Tests of Educational Progress, Series II (Step II) Science, Forms IA and IB. It was found that a significant number of students already know much of the math and science they supposedly would be taught in high school. Case studies of a 12 year old and a 13 year old who were sent to college on the basis of their test scores were examined. Each student evidenced superior academic adjustment without any major emotional or social difficulties. Released time, evening, Resources Center, Area Cooperative Educational Services, 12 Village Street, advanced students. A minimum estimate of the percentage of highly mathematically or scientifically precocious youths was reported to be .03%. Striking sex differences in high level achievement were noted.

ABSTRACTS OF SELECTED MATERIALS: ACES COMPUTER SEARCH

Instructional Materials and Strategies for Teaching Gifted and Talented Students - Research #740.260 prepared in April, 1974 by the Educational Resources Center, Area Cooperative Educational Services, 12 Village Street, North Haven, Connecticut 06473.

The staff at the Educational Resources Center did a complete search by computer for all available ERIC information since 1969 related to specific areas of curriculum development for the gifted. The complete report includes (118) abstracts and is located for future reference at the Educational Center for the Arts, 55 Audubon Street, New Haven, Connecticut 06510.

The following abstracts represent a sampling of some of the most relevant materials:

ED034353 EC004733

CALIFORNIA PROJECT TALENT: ACCELERATION PROGRAMS FOR INTELLECTUALLY GIFTED PUPILS
Robeck, Mildred C.
California State Department of Education, Sacramento
Spons Agency - Office of Education (DHEW), Washington, D. C.
Pub Date 68 Note-185p.
EDRS Price MF-$0.65 HC-$6.58
A description of Project Talent includes discussions of preceding research indicating that acceleration was effective and beneficial and outlines provisions utilized for acceleration (early admission, upgraded primary and elementary, individual and advanced placement, grade skipping, combination grades, and time compression). Detailed are the administrative procedures new programs, and the identification and placement of pupils in connection with the role of psychometrists, plus the counseling of pupils; parents, and teachers. The curriculum for the grade 3 summer session, with its goals, content, organization, and evaluation is provided. Functions and selections of case studies as used in the process of identification, and the study of intellectual development of the accelerate are discussed along with counseling methods. Evaluations are presented of the California Project Talent program, Pasadena's acceleration program, the Ravenswood program, and the placement of individuals in the California program. Also included are eight recommendations for the future, research suggestions, appendixes, and tables of results. (JM)

ED048697 EC031963

LITERATURE: CURRICULUM GUIDE FOR TEACHING GIFTED CHILDREN LITERATURE IN GRADES NINE THROUGH TWELVE
Osen, Deborah K.
California State Department of Education, Sacramento, Division of Special Education

Spons Agency - Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D. C.
Pub Date 70 Note-46p.
EDRS Price MF-$0.65 HC-$3.29

One of a series, the guide explores a special approach to the study of literature for gifted high school students. Curriculum objectives are stated based on the course framework: the types of literary criticism most prevalent in the twentieth century. Three sequences are discussed: looling at literature through the eyes of the new critics, the probe of the psychological critic, and a mythic approach to literary criticism. Suggestions for evaluation are included. A companion volume for teaching children in grades 1 through 3 is available as EC 031 962.

ED054594 EC033309

THE GIFTED CLASSROOM

Rouse, Ernest R.; et al
Illinois University, Urbana, Center for Instructional Research and Curriculum Evalution
Spons Agency - Illinois State Office of the Superintendent of Public Instruction, Springfield
Pub Date Jun 71 Note-166p.
EDRS Price MF-$0.65 HC-$6.58

A report of the Illinois Gifted Program Evaluation, the document first presents origins, policies, and scope of the reimbursement section of the Illinois Plan for Program Development for Gifted Children. Outlined is the evaluation design, in which subjects were 34 school districts representing a 10% stratified random sample of 340 districts. Each of the 34 had received state funds for two or more years. Data gathered on the best gifted program in each district included director, teacher, and student interviews, class activities questionnaires, classroom observation, and various documents. Data for five of the programs are presented as case studies. Described are school setting, circumstances for starting program, purposes, activities, and a typical day in class, with teacher and student comments reported. Evaluators' interpretation and discussion of each program is offered; judgment of program value is made on the basis of stated standards. Finally, findings from previous examinations of specific aspects of the reimbursement phase of the Illinois program are discussed, along with two aspects not previously reported: analysis of classroom verbal interaction and assessment of inservice training

ED060587 EC041515

SCIENCE: CURRICULUM GUIDE FOR TEACHING GIFTED CHILDREN SCIENCE IN GRADES ONE THROUGH THREE

Morrison, Charlotte
California State Department of Education, Sacramento, Division of Special Educatin
Spons Agency - Bureau of Elementary and Secondary Education
Pub Date 70 Note-37p.
EDRS Price MF-$0.65 HC-$3.29

The curriculum guide for teaching science to gifted primary grade children in California focuses on natural science, with an emphasis on ecology. Provided are a general overview of the unit, a set of behavioral objectives, a list of generalizations and concepts, a sample teaching-learning plan for the complete unit, and eight sample lesson plans. Each lesson takes up a different ecological topic: substratum, animal movement, seed dispersal, temperature's influence on environment, light, food, water and erosion. Each lesson plan includes behavioral objectives, teaching strategies, suggested questions and activities, and suggested resource materials. (KW)

ED060591 EC041519

SOCIAL SCIENCES: CURRICULUM GUIDE FOR TEACHING GIFTED STUDENTS SOCIAL SCIENCES IN GRADES TEN THROUGH TWELVE
Popham, Donald F.
California State Department of Eeudation, Sacramento, Division of Special Education
Spons Agency - Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D. C.
Pub Date 71 Note-43p.
EDRS Price MF-$0.65 HC-$3.29

The curriculum guide for gifted senior high school students presents an exemplary course of study in United States history at the 10th grade level. Each chapter deals with a different aspect of the course of study: changes in social structures, development of a sense of nationality, enslavement and mistreatment of Negroes, concentration of power in America, and foreigh relations. Specified for each topic are behavioral objectives, content and concepts to be covered, selected references, and activities. (KW)

ED062262 SO003037

PROJECT IMPLODE. IGNITING CREATIVE POTENTIAL
Bella Vista Elementary Schoo, Salt Lake City, Utah
Spons Agency - Office of Education (DHEW), Washington, D. C.
Pub Date 71 Note-136p.
Available from Bella Vista School, 2131 East 7000 South, Salt Lake City, Utah 84121 ($3.00)
EDRS Price MF-$0165 HC not available from EDRS

This booklet was produced for teachers in the hope that the philosophy of multiple talents, and productive thinking will be an aid in the development of future citizens. In the introduction, Calvin W. Taylor discusses talents as the central focus in all classrooms, new tests for identifying important talents heretofore neglected, and the need of a multiple accountability system for assessing educational outcomes. Each section on divergent production, convergent production, evaluation, creativity, planning, communication, forecasting, decision-making includes guidelines for recognizing and developing talents in that area. Talent development objectives with student activities are outlined, and related curriculum activities suggested. A lesson plan example and bibliography are appended. (VW)

ED071150 EA004642

ALTERNATIVE SCHOOLS: PIONEERING DISTRICTS CREATE OPTIONS FOR STUDENTS. EDUCATION U. S. A. SPECIAL REPORT
Watson, Douglas
National School Public Relations Association, Washington, D. C.
Pub Date 72 Note-65p.

Available from National School Public Relations Association, 1801 North Moore Street, Arlington, Virginia 22209. (Stock #411-12834, $4.00, Quantity Discounts)
EDRS Price MF-$0.65 HC not available from EDRS.
This report examines some of the many varieties of alternatives not available, their problems and pitfalls, and their hopes for the future. After defining alternative schools, the report discusses the rationale for having alternatives and then summarizes the range of alternatives available at both the elementary and secondary levels. Separate chapters are devoted to open plan schools; minischools; elementary alternatives; dropout schools; schools for slow learners, superior students, and for those students with other special problems; schools for racial or ethnic groups; and open schools for all students. Throughout the report descriptions of existing alternative programs in various parts of the country are presented. Chapters at the end of the report present advice on starting an alternative school, evaluating the school and its students, and on the financing and costs of an alternative school program. A 42-item annotated bibliography is included. (DN)

ED073575 EC051123

HANDS-ON, CAREER EXPLORATION FOR BRIGHT STUDENTS
Stovall, Betty J.; et al
North Carolina State Department of Public Instruction, Raleigh, Division for Exceptional Children
Pub Date 72 Note-92p.
EDRS Price MF-$0.65 HC-$3.29
Produced as part of a 5-week workshop on career explorations for 51 bright, middle grade students and 20 teachers, the curriculum guide discusses career education, outlines the workshop experiences, considers the inquiry process, and outlines 60 units on non-baccalaureate careers in 15 career clusters. A lack of career education programs with other than a college preparatory emphasis for bright students is said to have led to the workshop which provided teacher inservice training and 3 weeks of pupil experiences in six career clusters. Workshop experiences are reported to have included field trips, simulations, and actual experience with activities such as telegraphy, drafting, and bricklaying. The inquiry process of instruction which utilizes a variety of learning and teaching styles is outlined. The majority of the guide contains the career exploration units of which the tobacco farmer, floral designer, commercial bank teller, and game warden are examples. Units are outlined in terms of career cluster, career suggested problem introductory activities, hypotheses, investigation, conclusion, presentation, evaluation, and related disciplines. Appendixes include work preference scales used to evaluate the workshop. (DB)

ED074679 EC051699

SOCIAL SCIENCES: CURRICULUM GUIDE FOR TEACHING GIFTED STUDENTS SOCIAL SCIENCES IN GRADES SEVEN THROUGH NINE
Levine, Martin
California State Department of Education, Sacramento, Division of Special Education
Pub Date 73 Note-61p.
EDRS Price MF-$0.65 HC-$3.29
Presented is a curriculum guide for teaching gifted junior high students social studies. The main purpose of the curriculum is to heighten student awareness

of justice and due process of law by means of preparing for and conducting a mock trial of an historical figure. Thirteen cognitive behavioral objectives and five affective objectives are listed. Five to seven class periods are recommended for phase one of the curriculum which consists of motivation and background, introduction on themes and a study of the life and times of the defendant. Sample lesson plans are given for study topics such as the rights of the accused, the Bill of Rights, unreasonable search and seizure, the right to remain silent, and an introduction to due process. Phase two of the curriculum consists of preparation of roles for the trial in small groups and involves research skills and teacher-group interaction for five to eight class periods. Sample lesson plans consider initiation of phase two, organizing the groups, small group work, the culminating activity program, and suggested follow-up activities. A final chapter gives sample test items. An annotated bibliography of approximately 30 books or articles, six motion pictures and one filmstrip are also included. (DB)

ED079905 EC052319

CAREER EDUCATION FOR GIFTED AND TALENTED STUDENTS
Hoyt, Kenneth B.; Hebeler, Jean R.
Maryland Uni., College Park
Spons Agency - Office of Education (DHEW), Washington, D. C.
Grant-OEG-0-72-4843
Pub Date 73 Note-273p.
EDRS Price MF-$0.65 HC-$9.87

Presented are 11 invited papers on career education for gifted and talented students. An introduction to career education and to the gifted and talented is provided in two papers, of which one paper is on current status and approaches career education, and the other is on current status and approaches the gifted and talented. Consideration on three basic background papers are the future of work, identification and characteristics of gifted and talented students, and career development problems of gifted and talented students. Discussed in the next two papers are value considerations in career education for gifted and talented students. Exemplary programs in career education for the gifted and talented are described in the next chapter. The final section examines implications for curriculum guidelines in career education for gifted and talented students in three papers on the following topics: policy considerations, additional viewpoints on policy considerations, and curriculum considerations. (DB)

ANNOTATED LISTING OF SELECTED CURRICULUM MATERIALS AND ARTICLES

BACHTOLD, LOUISE M. - (Educational Research Project Consultant), Counseling Instructional Programs for Intellectually Gifted Students, Sacramento, California, California State Department of Education, 1966. Content includes rationale, characteristics, procedures and guidance for the Counseling Instructional Program which is applicable to both elementary and secondary levels.

BANKS, GEORGE W. - (Editor), Proceedings of Eight Annual Conference California Association for the Gifted, "Thene: Time Out for Talent", San Diego, California, Southern California Association for the Gifted, San Diego Unified School District and County Schools, 1970. The conference report includes effective teaching strategies and enrichment suggestions focusing on all levels (primary through senior high).

BRANDWEIN, PAUL F. - Teaching Gifted Children Science in Grades One Through Six, Sacramento, California, Bureau of Publications, California State Department of Education, 1973. A curriculum model for primary and intermediate grades which describes a science curriculum in detail.

BROOME, ELIZABETH - (ed.) and Governor's School Teacher Training Institute, Educating for the Future: 21st Century Teaching, Raleigh, North Carolina, Division for Exceptional Children, Department of Public Instruction, 1973. Contains theoretical background for developing curriculum for gifted children. Also has a large section with detailed lessons and ideas.

CALIFORNIA STATE DEPARTMENT OF EDUCATION - Education of Mentally Gifted Minors, IC-12, Capitol Mall, Sacramento, California, 1971.

CALIFORNIA STATE DEPARTMENT OF EDUCATION - Educational Programs for Gifted Pupils, "A Report to the California Legislature Prepared Pursuant to Section 2 of Chapter 2385, Statutes of 1957", Sacramento, California, California State Department of Education, 1961, pp. 27-32. A brief description of the programs involved in the report, includes enrichment, acceleration, special groupings and part-time interest groups for both elementary and secondary levels.

CALIFORNIA STATE DEPARTMENT OF EDUCATION - Principles, Objectives, and Curricula for Programs in the Education of Mentally Gifted Minors: Kindergarten through Grade Twelve, Sacramento, California, Bureau of Publications of the California State Department of Publications, 1971. Chapter III, pages 34-80, indicates the broad bases and overall philosophy regarding curriculum and instruction for gifted minors in California public schools for grades K-12 in the following subject areas: mathematics, science, English usage, literature, social sciences, foreign languages, art and music.

CALIFORNIA STATE DEPARTMENT OF EDUCATION - Program Administration, Administration 2 - Report of a Pilot Summer Session Workshop-Demonstration, Sacramento, California, California Project Talent, 1964. This report outlines the demonstration centers which offered differentiated programs for gifted children. The major purpose of the program was as an in-service training center to provide knowledge concerning curricular provisions suited to the gifted -- Grade 3 - emphasizing individual placement, pp. 7c-7i; Grade 6 - emphasizing enrichment, pp. 8b-8o; Grade 7 - emphasizing counseling-instruction, pp. 9b-9j.

CENTER FOR INSTRUCTIONAL RESEARCH AND CURRICULUM EVALUATION - University of Illinois, The Gifted Classroom, Urbana, Illinois, 1971. Test encompasses the standards and themes of five case studies which focus on creativity, learning and independent study on the primary and middle levels.

Curriculum Material Developed for Ceiling Unlimited - A Program for the Highly Gifted Student at the Junior High School Level, Brockton Public Schools, Brockton, Massachusetts, 1970. An extensive collection of detailed units of study for gifted students in grades 7 through 9. Contains over one dozen interdisciplinary, humanities-based units in such areas as communication, religion and architecture, psychology, cinematography, and mythology. Also contains sections on social science, foreign languages, independent study, mathematics and science.

DEMING, BONNIE J. AND KLEIN, JACK L. - Literature: Curriculum Guide for Teaching Gifted Children Literature in Grades One Through Three, Sacramento, California, California State Department of Education, 1970. Guide designed for developing concepts in literature, includes specific teaching activities.

Education of the Gifted and Talented, Report to the Congress of the United States by the U. S. Commissioner of Education, 1972, - National School Public Relations Association, 1201 Sixteenth Street, N.W., Washington, D.C., 20036. This publication is an up-to-date national view of programs for the gifted. For persons responsible for developing programs for the gifted and talented, it provides a sharp focus on the needs and problems as well as good ideas and practical information to meet these challenges. Some of the topics are: Can we identify the gifted from minorities and diverging cultures? Can we identify the creative and talented? What is a good program for the gifted? Because the material is authoritative, it is a good resource to introduce teachers, administrators, board members and parents to the special needs of gifted and talented students. The report is available free from many congressmen.

ETHERIDGE, GEORGE W., HEDGES, ROBERT E., AND YOUNGS, RICHARD C. - Teacher, Child and Curriculum, "A Program for Individualizing Instruction." Monograph is a part of a training program which utilizes Guilford's Structure of Intellect model to assess human abilities. It includes examples of activities, manipulative materials and references - applicable to all levels.

FLIEGLER, L.A., (ed.) - Curriculum Planning for the Gifted, Prentice-Hall, Englewood Cliffs, New Jersey, 1961.

GALLAGHER, JAMES - The Culturally Different Gifted Child, A Conference Report, The Council for Exceptional Children, Jefferson Davis Highway, Arlington, Virginia 22202, available in Fall 1974. The educational problems of culturally different gifted children were the focus of a work conference held September, 1973 at the Quail Roost Conference Center, Rougemont, North Carolina. This report is a summarization of the major issues and barriers

perceived by over forty participants who work with culturally different gifted children, and the recommendations for action to overcome these barriers. This report will be sent free to all current members of TAB.

GALLAGHER, JAMES - Teaching the Gifted Child, Allyn Bacon, Inc., Boston, 1964.

GALLAGHER, JAMES J., ASCHNER, MARY JANE AND JENNE, WILLIAM - Productive Thinking of Gifted Children in Classroom Interaction, CEC Research Monograph Series B, No. B-5, Washington, D.C., The Council for Exceptional Children, NEA, 1967. Content includes an overview, objectives and applications of the various thought processes on both primary and intermediate levels.

GIBBONY, HAZEL L. - Enrichment Classroom Challenge, Ohio, Columbus Blank Book Company, 1966. Many ideas and activities that can be used with individual students or groups both on the elementary and secondary school level, encompasses the basic subject areas, e.g., language arts, social studies, science, math, art and music.

GUBSER, JOY HILLS AND HAGGERTY, CHARLES P. - Planning for Able and Gifted Children in Oregon, Salem, Oregon, Oregon State Department of Education, 1962, pp. 19-44. Content includes many suggestions for enrichment in academic areas. Also it includes sources for instructional material and bibliography for reference on both the primary and intermediate levels.

GUILFORD, J. P. - Intelligence and Creativity: Their Educational Implications, Robert Knapp Publishers, Great Britain and San Diego, 1968.

HILL, MARY BRODERICK, (ed.) - Enrichment: Programs for Intellectually Gifted Pupils, Sacramento, California, California State Department of Education, 1969. A final report on the Enrichment Program conducted in the Los Angeles Unified School District. It includes outlines of courses which provide enrichment through the development of creative expression, critical appreciation, and the scientific approach.

HOPKINS, LEE BENNETT AND SHAPIRO, ANNETTE D - Activities for Gifted Children in the Classroom - School and Community, New York , Bank Street College of Education. A series of suggested experiences which can be utilized in the classroom and in the community, indluding resources for trips on primary and intermediate levels.

HOPKINS, LEE BENNETT AND SHAPIRO, ANNETTE FRANK - Creative Activities for the Gifted Child, Palo Alto, California, Fearson Publishers, 1969. More than 100 enrichment ideas, many of which can be self-directed. The areas covered are art, science, geography, social sciences, history, mathematics, political science, music, language arts, home economics and physical education.

KAPLAN, SANDRA N. - Providing Programs for the Gifted and Talented: A Handbook, (Working Draft) National/State Leadership Training Institute on the Gifted and Talented in cooperation with National Clearinghouse on the Gifted and Talented, July, 1973. This handbook presents background information on program development, worksheets, and models which illustrate successful program ideas. Especially useful is the section on curriculum design which

presents guidelines for developing differentiated curriculum materials for the gifted and talented, including theoretical principles and a practical discussion of elements and types.

LEVINE, MARTIN - Social Sciences: Curriculum Guide for Teaching Gifted Students Social Sciences in Grades Seven Through Nine, Sacramento, California, California State Department of Education, 1973. A unit study for grades 7-9 intended to heighten student awareness of justice and due process of law through meaningful involvement with the Bill of Rights. There are sample lesson plans and behavioral objectives which apply to both cognitive and affective areas. Ideas are included for role-playing, group discussion. Bibliography included.

LUCA, MARK C. AND ALLEN, BONNIE - Teaching Gifted Children Art in Grades Four Through Six, Sacramento, California, California State Department of Education, 1973. Curriculum guide which emphasizes the nature and purpose of art education.

LEWIS, GERTRUDE M. - Educating the More Able Children in Grades Four, Five, and Six, Washington, D.C., U. S. Department of Health, Education, and Welfare, 1961. Many ideas and activities challenging children's abilities.

MARTINSON, RUTH A. - Curriculum Enrichment for the Gifted in Primary Grades, Prentice-Hall, 1968.

NEW YORK CITY BOARD OF EDUCATION - Promoting Promise: Report of the Citywide Committee on Gifted Children, New York, New York, Board of Education of the City of New York, 1968. A general overview of present New York City programs for gifted children on three levels, with recommendations for change. Curriculum implications appear on the following pages: elementary program descriptions - pp. 18-20, junior high program descriptions - pp. 29-30, 34; high school honors and talented programs - pp. 42-44.

NEW YORK CITY BOARD OF EDUCATION - Division of Elementary Schools, Guiding the Gifted: Vol. 6, Number 1, Board of Education, City of New York, 1965. Descriptions of teachers' experiences, techniques and devices used in New York City Schools to involve gifted children in the critical thinking process.

PARNES, SIDNEY - Creativity: Unlocking Human Potential, D. O. K. Publishers, Buffalo, New York, 1972.

PAULUS, DIETER H., SHAW, ROBERT A., BENNY, ROSALIE J., DAVIS, SYLVIA A., GAGNE, DOMINQUE R., AND HOLCOMBE, ELAINE K. - Operation ASTRA: A Study Guide for Sentence Reasoning, An Experimental Unit, Hartford, Connecticut, Hartford Public Schools, 1969. An enrichment unit designed to nuture rational thinking in the middle grades.

PILCH, MARY M. - (Project Director), Special Education for the Gifted Through Television, Minnesota, Educational Research and Development Council of Northeast Minnesota, 1968. Model incorporates instructional television with the development of creative thinking and teaching strategies in the middle schools.

PLOWMAN, PAUL D. AND RICE, JOSEPH P. - (co-directors), California Project Talent, Sacramento, California, California State Department of Education, 1967. Content includes an overview of talent development, exemplary projects and programs on the elementary level.

PLOWMAN, PAUL D. AND RICE, JOSEPH P. - (co-directors), Demonstration of Differential Programming in Enrichment, Acceleration, Counseling and Special Classes for Gifted Pupils in Grades 1-9, Sacramento, California, California State Department of Education, 1967. Content includes the design, operation, findings and accomplishment of enrichment, acceleration, counseling and special class programs.

PLOWMAN, PAUL D. AND RICE, JOSEPH P. - (co-directors), Final Report, California Project Talent, Sacramento, California, California State Department of Education, 1969. Content includes structural program designs for enrichment, acceleration and counseling-instructional demonstration for both elementary and secondary levels.

REID, AVIS - Let Him Read, In-service Training Manual No. 3, Hutchinson, Minnesota, Gifted Opportunities Center, March, 1970. Rather than an outline for reading curriculum, this bulletin capsules the ideas of many experts for reading programs for gifted children - pp. 9-14.

RENZULLI, JOSEPH S. - New Directions in Creativity, New York, Harper and Row, 1973 (3 vols.). Contains practical suggestions and classroom exercises for developing creativity in the language arts based on the divergent-production slab of Guilford's Structure-of-Intellect model. Each volume also has dozens of ditto masters for activities in grades 4 through 7.

ROBECK, MILDRED C. - Acceleration Programs for Intellectually Gifted Pupils, Sacramento, California, California State Department of Education, 1968, pp. 60-71. An overview of the curriculum offerings in a six-week summer program which resulted in accelerating second grade students into the fourth grade.

ROBECK, MILDRED C., (ed.) - Special Classes Demonstration: Special Classes 3, Social Science, How the Anthropologist Studies Man - The Chumash Indians, Sacramento, California, California Talent Development Project, State Department of Education, April, 1966. This publication is a detailed unit of study on the Chumash Indians which illustrates how thinking operations of students to higher levels than may be attained by undirected approaches. Guilford's Structure-of-Intellect model was used as a basis for planning, with attention given to social science content, intellectual content, and affective content. The approach could be adapted to other subject areas, particularly in the social sciences. Level - Grade 4.

SHAW, ROBERT A., et al - An Adventure in Geometry: Experimental Unit Developed for Operation ASTRA, Hartford, Connecticut, Hartford Public Schools Production, 1969. A 99-page self-directed activities workbook in geometry designed by the Hartford, Connecticut Regional Planning Program for Academically Gifted Children as a supplementary enrichment unit to further the intellectual development of youngsters with identifiable superior abilities. It provides differentiated experiences at the middle grade level.

SHAW, ROBERT A., et al - Modular Arithmetic: Enrichment Unit Developed for Operation ASTRA, Hartford, Connecticut, Hartford Public Schools Production, 1969. An 85-page self-directed activities workbook in modular arithmetic, developed by the Hartford, Connecticut Regional Program for Academically Gifted Children as a supplementary enrichment unit to further the intellectual development of youngsters with identifiably superior abilities. It provides differentiated mathematical experiences for the middle grade level.

TONGUE, CORNELIA, (ed.) - PotPourri: Productive Programs for Gifted/Talented, Raleigh, North Carolina, Division for Exceptional Children, Department of Public Instruction, 1972. This is a compilation of about forty descriptions of programs in the state of North Carolina which were evaluated as outstanding or which possessed worthwhile components on the instructional level for the gifted child. Although not detailed in respect to curriculum content, it describes a variety of approaches: enrichment, resource teacher, team teaching, multi-graded, self-contained, year-round school, advanced placement, honors program, etc. for grades 1-12. A contact person is listed with each program descripton.

VASSAR, WILLIAM G. - Strengthening State and Federal Relationships in the Education of the Gifted and Talented, A Syllabus for the First National Summer Institute on the Education of the Gifted and Talented, Ventura County, Illinois, Ventura County Superintendent of Schools, July, 1973. Points out the direction in curriculum planning for the gifted toward differentiated curriculum. It suggests the roles of the state education agency and the local education agency in providing services for curriculum planning.

WARD, V. S. - Educating the Gifted, Charles Merril Books, Columbus, Ohio, 1961.

WILLIAMS, FRANK E. - Total Creativity Program for Individualizing and Humanizing the Learning Process, Englewood Cliffs, New Jersey, Educational Technology Publications. A kit with many components for teaching the thinking and feeling processes. Includes hundreds of actual lesson ideas, evaluation forms, teaching strategies, and observational instruments used in language arts, social studies, science, arithmetic, art, and music. Also includes a media resource book, teaching strategies, and cassettes on teacher training and demonstration lessons.

KEY BOOKS RECENTLY PUBLISHED

Broome, Elizabeth, (ed.) and Governor's School Teacher Training Institute, Educating for the Future: 21st Century Teaching. Raleigh, North Carolina: Division for Exceptional Children, Department of Public Instruction, 1973. This volume contains a short theoretical background for developing curriculum for gifted students. It also has a much longer section of collected lesson plans and activities for gifted students at the junior high school and high school levels. There is a succinct overview of Frank Williams' model for implementing cognitive-affective behavior in the classroom, followed by 15 model lessons. For each lesson, the student behavior being developed, the content area, and the teacher behavior (strategy) are listed. (S&PC)

Clifford, Gloria; Heger, Rosemary and Sebree, Shirley, The World of the Gifted, Toledo, Ohio: Toledo Public Schools, 1974. This is a manual which attempts to help regular teachers at the K-6 levels provide stimulation of identified gifted students in their classrooms, through the use of extended activities in appropriate areas of giftedness. There is a short section on identifying gifted and talented children within the regular classroom setting, including a teacher checklist. This is followed by longer sections of collected activities for the students in the areas of logic, literature, and independent investigations. The skills developed in the logic section are identification, classification, extrapolation and application. The literature activites are designed to foster various forms of creative expression. The independent investigations are individualized learning plans which allow students to work independently, process information and create an end product to show what has been learned. (S&PC)

Contemporary Curriculums, Multi-Talent Program. Oak Lawn, Illinois: Contemporary Curriculums, Post Office Box 83, Oak Lawn, Illinois 60453, 1972. This book is a model for program development for schools considering "gifted" or talent-development programs. The model provides a framework for developing all elements necessary for a program, using specially prepared guidelines and "option" materials. School personnel develop program through examining options and choices, and making informed decisions. The Multi-Talent Program model concentrates on the identification and training of key skills of several talents. Materials focus on the skill-level rather than the broader and more nebulous talent-level. (S&PC)

Edwards, Dale, Imaginative Questions - Patterns for Constructing Divergent Questions. Oak Lawn, Illinois: Contemporary Curriculums, Post Office Box 83, Oak Lawn, Illinois 60453, 1972. This book describes seven basic questioning patterns teachers can apply to any classroom subject. These questioning patterns train students to become more flexible in their thinking processes and more insightful in their perceptions. Designed to be practical and specific, this book clearly explains each of the patterns and provides numerous examples. (S&PC)

Edwards, Dale, Getting It All Together - Guidelines for Creativity Programs. Oak Lawn, Illinois: Contemporary Curriculums, Post Office Box 83, Oak Lawn, Illinois 60453, 1972. Guidelines for using the questioning patterns in Imaginative Questions are supplied in this book. Among the topics covered are: when and where to use the questions in an instructional sequence, how to integrate them with other kinds of questions, how to introduce them to students for the first time, and how to apply student responses to class work. (S&PC)

Edwards, Dale, Creative Insight - A Manual for Divergent Discussions. Oak Lawn, Illinois: Contemporary Curriculums, Post Office Box 83, Oak Lawn, Illinois 60453, 1972. This booklet provides a clear step-by-step method for designing and leading a "divergent" discussion. Divergent discussions are used to stimulate creative thinking and the generation of new insights. Using the questioning patterns explained in Imaginative Questions, it shows the teacher how to structure the discussion to encourage higher level thinking abilities. (S&PC)

Gotch, Sharon, Charlotte's Web - A Creativity Sourcebook. Oak Lawn, Illinois: Contemporary Curriculums, Post Office Box 83, Oak Lawn, Illinois 60453, 1973. This book provides a compilation of ideas for the teaching of Charlotte's Web by E. B. White. It centers on the development of creative thinking in children and includes worksheets, discussion guides, imaginative questions, activities and projects. Each activity is carefully developed around one of the following creative thinking skills: originality, fluency, flexibility, and association. (S&PC)

Martinson, Ruth, A Guide Toward Better Teaching for the Gifted. Ventura, California: LTI. A pioneer in gifted education, the author suggests careful study of this book with reference to one's own teaching to "increase greatly a teacher's satisfaction in working with the gifted." To be used indidually or by small groups of teachers, the 72-page book includes forms and scales which can be adapted to individual situations. Chapter titles include "Need for Preparation," "Past and Present Efforts," "Curriculum Planning," "What is at Stake?" and "The Teacher Meets the Need." Martinson spent the major part of her career as professor of education and psychology at Long Beach (California) State College, and in planning and developing teacher education and graduate programs at California State University, Dominguez Hills.

Martinson, Ruth, The Identification of the Gifted and Talented. Ventura, California: LTI. An Instruction Syllabus for the Education of the Gifted and Talented presenting a rationale for the identification of gifted students. This 145-page book suggests appropriate identification procedures and gives examples of materials used by various school districts.

Project Clue, Why Doesn't an Igloo Melt Inside? - A Handbook for Teachers of the Academically Gifted and Talented. Memphis, Tennessee: Memphis Program for the Academically Gifted and Talented CLUE, sponsored by Title III, Elementary and Secondary Education Act, 1973. This book is a model of an ongoing gifted program for high academic students in grades four to six. The general objective of the program is the development of a model for achieving the involvement of urban students in learning strategies designed to change student apathy into positive action and to channel student activism into responsible accomplishment. There is a considerable exploration of teaching-for-thinking strategies such as mind stretchers, creative activities, hypothesizing, group dynamics activities and sentence reasoning. Other sections of the book include Group Discussions and Effective Questioning Techniques, Mini-Courses, and Independent Projects. (S& PC)

Renzulli, Joseph, The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented. Wethersfield, Connecticut: Creative Learning Press, 1977. In this book Renzulli addresses some of the age-old questions that haunt persons that are attempting to develop programs for the gifted and talented. A distinction is drawn between enrichment activities that are essentially good for all youngsters and those that are relatively unique for gifted and talented students. While he is critical of practices that rely expressly on kits, games and puzzles, he points out numerous examples of qualitative differentiation that he has observed across the country. The book also includes newly developed instruments for identifying student interests and community resources and for directing individual and small group research activities.

Renzulli, Smith, White, Callahan and Hartman, Scales for Rating the Behavioral Characteristics of Superior Students. Wethersfield, Connecticut: Creative Learning Press. This new and expanded version of the "Renzulli Rating Scale" is based on a multiple talent approach to the identification of gifted and talented students. The following ten teacher rating scales are included: learning, motivation, creativity, leadership, art, dramatics, planning, communication one and communication two. The enlarged manual contains information about the administration and interpretation of the scales and the description of the research studies that were conducted to establish their validity and reliability. The scales themselves are prepared on 8-1/2" x 11" sheets that can be reproduced in accordance with individual program requirements.

Sisk, Dorothy, Teaching Gifted Children. South Carolina: Developed in conjunction with a federal grant from Title V, section 505. This is a handbook for building curriculum ideas. After a short section on theoretical models there are twelve sections on different teaching strategies and sample activities which demonstrate the application of the strategy. Among these are self-awareness techniques, questioning strategies, independent study, small group techniques, synectics: tool for problem-solving, inquiry and simulation. There is also a section on guidance and counseling needs of gifted students and their parents. (S&PC)

Toledo Public Schools, The Phoenix Project. Toledo, Ohio: Title III, ESEA, 1974. This is a description of a gifted program for high school students which attempts to move beyond traditional concepts of both acceleration and enrichment. Language Arts and social studies are combined in a team taught humanities course. Math and Science are combined into a technology course. A counseling component is added with emphasis on self-awareness, values, interactions, and adult options. All curriculum is integrated under a unifying philosophical position about man and his role in the world. Units are presented in English, History, Science, and Algebra. (S&PC)

ANNOTATED BIBLIOGRAPHY ON PROGRAM DEVELOPMENT

(Key books recently published)

Boston, Bruce (ed), A Resource Manual of Information on Educating the Gifted and Talented, ERIC/CEC. This manual offers helpful perspectives on the state of the art. Up-to-date resources include directories of federal, regional and state agencies. This includes appendix of film resources, and a bibliography.

Boston, Bruce (ed), Gifted and Talented Developing Elementary and Secondary School Programs, ERIC/CEC. This manual contains articles on values of education for the gifted, disadvantaged gifted, instructional planning, starting a gifted program, and features an interview with Dr. James Gallagher. Includes a bibliography.

Gallagher, Ashner, and Jenne, Productive Thinking of Gifted Children in Classroom Interaction, ERIC/CEC. This is a book on inter-relationships among sex, family environment, self-concept, cognitive style, verbal expressiveness, IQ score, and scores on productive thinking tests among gifted secondary school students.

Grove, Richard, The Arts and the Gifted, ERIC/CEC. This is an overview and presentations from The National Conference on Arts and Humanities/Gifted and Talented, 1975. Includes addresses by Murray Sidlin, Nat Hentoff and Virginia Y. Trotter.

Kaplan, Sandra, Providing Programs for the Gifted and Talented - A Handbook (Including Worksheets and Models). Ventura, California: LTI. An Instructional Syllabus for the National Summer Leadership Training Institute on the Education of the Gifted and the Talented, this 264-page supplemental resource book presents an overview of the features and procedures for designing and implementing a program. This handbook would be particularly useful for those initiating or expanding a program for the gifted and the talented.

Khatena, Joe, Major Directions in Creativity Research, ERIC/CEC. In this special interest paper from the CEC Information Center the general state of the art in creativity studies is examined and descriptions of new research initiatives is offered.

Kreuger and Newman, Arts and Humanities: Perspectives on Gifted and Talented Education, ERIC/CEC. Here are directories, articles on arts and humanities education for the gifted and talented, funding sources, community resources, and a bibliography.

Maker, C. June, Training Teachers for the Gifted and Talented: A Comparison of Models, ERIC/CEC. This book examines pre and inservice models for training teachers of gifted and talented children and youth within a perspective of the classroom teacher as change agent. Bibliography and listing of colleges and universities offering degree programs in gifted education.

Sato, Birnbaum, and LoCicero, Developing a Written Plan for the Education of Gifted and Talented Students (Working Draft). Ventura, California: LTI. This is a framework to facilitate the writing of plans to meet individual needs for gifted education in 62 pages. A comprehensive course of action can be built from this matrix, developed from the National Summer Institute on the Education of the Gifted and Talented.

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BIBLIOGRAPHY ON AFFECTIVE NEEDS

Included in the following pages are bibliographies and lists of other resource materials which may be useful to the teacher of the gifted. They cover three main areas:

1. AFFECTIVE EDUCATION - a) Books which deal with the Human Potential Movement, Humanistic Education, Confluent Education, etc. and b) Books that share and communicate personal feelings directly from author to reader.
2. INTERPERSONAL SKILLS - Books which suggest activities in self-awareness, values, decision-making, sharing feelings, etc., which can be adapted for classroom use.
3. CAREER DEVELOPMENT - a) Books on career education, guidance and counseling for gifted students, b) Career information kits and decision-making courses, and c) "Career and College Search" independent study program.

Because the strategies and activities involved in affective education and the development of interpersonal skills require the teacher to become more of a facilitator of learning than a "teacher", teacher of the gifted should also be aware of and may want to participate in some type of training program that deals with the effective use of such strategies and activities.

In addition to all of these, teachers should also know that probably the most important of the resources available to them are the counselors, school psychologists and school social workers whose services may be useful to both students and teachers in numerous ways. Testing, for example, either for identification of gifted students, their needs, problems and interests or for evaluation of objectives is only one area in which the assistance of such specialized personnel is likely to be helpful and appropriate.

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Career Information Kit -- Science Research Associates - A file of folders describing various careers including information on background, requirements, training, earnings, advantages and disadvantages and places to write for more information.

Career View Deck -- A system similar in format to the College View Deck but pertaining to various characteristics of employment opportunities.

College View Deck -- Chronicle Guidance Publications, Inc., Moravia, New York - A card correlation system that students can use to identify colleges which suit their needs in terms of location, costs, enrollment, program, etc.

Deciding -- (7th, 8th, 9th grade level)
Decisions and Outcomes -- (10th, 11th, 12th grade levels) - College Entrance Examination Board programs which use workbooks to give students experience in the three main elements of decision-making: examining and recognizing personal values, finding and using adequate and relevant information and creating and using risk-taking strategies for converting information into action. For information on workshops and materials write to Decision-Making Program, College Entrance Examination Board, 888 Seventh Avenue, New York, New York 10019.

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